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CLASSIFIED
Gymnasium Exercises
ROBERTS' SYSTEM.

A. K. JONES.

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CLASSIFIED

GYMNASIUM EXERCISES,

OF SYSTEM OF R. J. ROBERTS,

WITH NOTES.

COMPILED BY A. K. JONES.

SECOND EDITION, REVISED AND ENLARGED,
WITH NEW ILLUSTRATIONS.

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NOTE.

This second edition of CLASSIFIED GYMNASIUM EXERCISES, like the first, is prepared alike for those who lead classes in gymnastics and their pupils.

Having explicit notes on groups of calisthenic exercises, it will be useful for those interested in physical culture at home.

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ARM THRUSTS WITH LEG EXPRESSION.

1. Back Horizontal, add Back Hammer.
2. Side of Thighs, add Back Oblique Hammer.
3. Sides Horizontal, add No. 1 Side Hammer.
4. Front Horizontal, add Front Oblique Hammer.
5. High Vertical, add Front Oblique Hammer.

NOTES.

POSITION. — Feet together ; hands on upper front chest. Shoulders well back. Perform each thrust on sixteen counts.

1. Thrust the hands down under armpits, and to a back horizontal as near as possible, without throwing the head forward.

2–5. Thrust the hands in the direction mentioned.

COMBINATIONS.—Combine 1 and 2, 2 and 3, 3 and 4, and 4 and 5.

TWELVE-COUNT COMBINATION.—Make each separate thrust in order *once* and after bringing the hands down from high-vertical, raise them again to a vertical; then separate, bringing them down hard through side horizontals to thighs.

Do not add the hammers until the class becomes familiar with the arm thrusts.

FREE THIGH WORK.

1. Right Front Thigh.
2. Left Thigh.
3. Right Outside Thigh.
4. Left Thigh.
5. Right Inside Thigh.
6. Left Thigh.
7. Right Back Thigh.
8. Left Thigh.

NOTES.

Stand with feet together and hands on hips. Body *erect.* Practice each movement on eight or twelve counts, first with right thigh, then with left.

1. Raise the right thigh in front of the body, knee straight and toe pointing away from the body; and return to the side of left.
3. Raise the right thigh out to the right side, and return.
5. Cross right thigh in front of left, and return.
7. Raise the right thigh backwards, and return.

HOME DUMB-BELL DRILL.

1.	Forward push.	Emphasize	all counts.
2.	Sternum elevator.	"	2 and 4 "
3.	Push to sides horizontal.	"	all "
4.	Side chest opener.	"	3 and 4 "
5.	Vertical push.	"	all "
6.	Muscular chest.	"	3 and 4 "
7.	Flip. (Don't go beyond vertical)	"	all "
8.	Dry land swim.	"	2 and 4 "
9.	Combine 1, 3, 5 and 7.	"	all "
10.	Cradle rock and yawn stretch.	"	all "

1st Position.

NOTES.

In any of the movements, in swinging high overhead, do not lean back beyond the vertical, except in special cases of corpulent men who need abdominal muscle work.

By "emphasize" is meant, more power to be put on the part of the exercise thus designated than on the other parts.

The bent arm movements are 1, 3, 5, 7 and 9.

The stiff arm movements are 2, 4, 6, 8 and 10.

In doing the bent arm movements, as you swing bells between legs, do not swing bells out too far forwards, and do not strike the floor with bells, but swing them down and back between the legs, letting knees bend naturally. Also allow each vertebræ of the spinal column do its part in bending the back, so that your spinal column will be semi-circular. Let the head down as far as possible so that you can see the wall back of you as you stoop.

POSITION.—Heels 20 inches apart, hands grasping bells tightly, chin in, head back, shoulders back and down.

FORWARD PUSH.—Position. (See cut.)—Bells in front of upper chest, palms facing chest. Count 1, swing bells between legs, palms together; bend the back as much as possible, getting head near to floor; bend the knees a little. Count 2, bring bells to front of shoulders. Count 3, push hard to front horizontal, twisting the fore-arms so that the palms will be down. Count 4, back hard to shoulders.

STERNUM ELEVATOR.—Position—Bells at high vertical, palms front, elbows stiff, arms close to ears. Count 1, lower bells to front horizontal, palms down, reaching forward as far as possible without raising off the heels. Count 2, separate bells to sides horizontals. Count 3, back easy to front horizontal. Don't strike them, for it tends to develop the muscles that draw the shoulders forward. Count 4, return bells to high vertical, sliding the arms close by the ears.

SIDES PUSHES.—Position—Bells at sides of shoulders, elbows well back and down, trying to touch them behind the back. Count 1, swing bells between legs. Count 2, back to position. Count 3, push bells to sides horizontals, twisting fore-arms so that palms will be down. Count 4, return to position.

SIDE CHEST OPENER.—Position. (See cut.)—Bells at high vertical, elbows straight, arms close to the ears, backs of hands together and raised up as far as possible without raising off the heels. Count 1, separate hands to sides horizontals, palms down. Count 2, swing easy to front horizontal.

Count 3, back to sides horizontals hard. Count 4, return bells to high vertical, the four ends of the bells touching when they reach the high vertical.

VERTICAL PUSH.—Position—Bells on top of shoulders, elbows at sides horizontals. Count 1, bring bells between legs same as in Forward Push. Count 2, bring bells to top of shoulders. Count 3, push to high vertical, twisting the bells so that the backs of the hands will come as close together as the bells will allow, elbows straight and arms close to ears. Count 4, return bells to top of shoulders.

MUSCULAR CHEST.—Position—Bells at side of thighs. Count 1, raise bells to sides horizontals, elbows stiff, palms down. Count 2, swing easy to front horizontal, elbows stiff. Count 3, swing back hard to sides horizontals. Count 4, bring bells down hard to sides of thighs, contracting the back upper arm and back lower chest mucles. Pay much attention to putting strong emphasis on this count, as it quickly develops the contractile power of the muscles that keep the shoulders down and back.

FLIP.—Position—Same starting position as in Muscular Chest. Count 1, swing between legs. Count 2, swing bells up and back over the head, touching the bells between the shoulder blades. Count 3, swing back between legs. Count 4, swing bells up to a high vertical. Keep the elbows straight and reach forward as far as possible without raising off the heels, while passing the bells up to high vertical. Hands close together, rubbing the arms against the ears. If the waist girth is small never go beyond a vertical in the high vertical reach. If waist girth is large go about 6 inches beyond vertical.

DRY LAND SWIM.—Position. (See cut 2d, movement, chest weights.)—Hold the hands well back past the hips, back of hands forward. Don't let the chin drop forward or the chest sink in when taking this position. Count 1, swing up to front horizontal, elbows stiff, palms down. Count 2, separate bells to sides horizontals, palms down. Count 3, bring back easy to front horizontal. Count 4, swing down past sides of thighs to starting position, throwing chest well forward as the bells pass the sides.

COMBINE 1, 3, 5 AND 7.

FORWARD PUSH.—Count 1, swing between legs.
Count 2, bring to face of shoulders.
Count 3, push to front horizontal.
Count 4, bring back to face of shoulders.

SIDES PUSHES. — Count 5, swing between legs.
Count 6, back to sides of shoulders.
Count 7, push to sides horizontals.
Count 8, back to shoulders.

VERTICAL PUSH.—Count 9, swing between legs.
Count 10, bring to top of shoulders.
Count 11, push to high vertical.
Count 12, down to top of shoulders.

FLIP . . —Count 13, swing between legs.
Count 14, swing to back of neck.
Count 15, swing between legs.
Count 16, swing up to high vertical.

CRADLE ROCK AND TOE YAWN STRETCH.—Position. Bells at a high vertical, elbows stiff, arms close to ears, palms of the hands as close together as the bells will allow, and *reaching up as high as possible without raising off the heels.* Chest out, chin in, shoulders square to front, small of back hollowed, stomach in, knees stiff. Don't lean either forward or backward.

CRADLE ROCK.—Lean the body to the right through one-eighth of a circle. Keep square on the feet. Count 2, rock toward the left side. Count 7½, or 15½, straighten up into starting position. While slowly counting "1, 2, 3," raise on tip-toes, reaching up to the *highest limit.* Fill the lungs slowly while doing this exercise, as all the lower diameters of the chest will be more freely expanded.

Three different positions of the legs can be used effectively with this drill. First, feet together and knees straight. Second, feet spread and knees straight. Third, feet spread and bend knees when swinging bells between them.

After the class becomes familiar with one position of the legs change to another.

Combine the following additional exercises to this drill after the class has become thoroughly familiar with the foregoing:

Combine front hammer with the second count of all the straight arm exercises, Nos. 2, 4, 6 and 8. Add other suitable hammers in the same way.

PERSONAL HINTS TO THIS DRILL.

When *this drill is memorized*, drop the 16th or 24th count and name the next exercise instead, passing from one movement to another without making any *stop*. The effect is *pleasing* and on that account is more beneficial. Always work long enough to get the body into a state of free perspiration when you use this drill as a substitute for your gymnasium hour. Repeat, several times, a movement before you pass on to the next exercise. Use this drill wisely, as out of it you can make slow, light, quick or heavy work, as the state of your constitution and temperament may demand. To illustrate, if you are of a nervous temperament practice the drill slowly. If very fat or of a phlegmatic temperament, with a few exceptions, do your work more quickly. If you are in a fairly normal condition, work moderately strong and fast enough to make the body perspire. If you wish to grow very strong and gain a showy, muscular development, work hard, slow and long and put strong action into all parts of each exercise as though you were using ten-pound bells. Be careful not to overdo in this last way of working, as you can make yourself as *slow* and muscle-bound as a heavy lifter or heavy dumb-bell pusher. Truly, free bodily movements, of which this drill is a type, are the foundation of body-building work. To prevent any soreness, practice very lightly and for short periods of time. Then increase your working time in moderate doses and practice the drill regularly the day you do not attend the gymnasium, and your soreness will not be so apt to return. If you are faithful for a season in the daily practice of this valuable little home drill, you will become more active, stronger, more enduring and better able to drink in more freely than ever before that only true purifier of the blood—fresh outdoor air.

If the chest is *flat*, follow the hint that is given with the flip and *don't* go beyond a vertical, and practice the sternum elevator an *extra* number of times. If the chest is narrow pay

much attention to the *faithful* practice of side chest opener and the vertical push. When the chest is flat and narrow everything should be done to quickly increase the size of the lung room, so daily use the out-door breathing exercise and the in-door breathing extensions lying flat on the back. If the muscular chest is poorly developed practice the muscular chest very often. If the abdomen is large the flip is *your* special work, taking care to always go beyond your vertical. If you are stooped shouldered the dry land swim is indicated. If the loins are weak the cradle rock is the work to practice the most. Generally the parts of this drill that should be used the most is that part or parts that *weary* one the *quickest.* Take the special work at a time of the day that you feel fresh and strong. *Always* stop exercising while you feel in a state of *invigoration.* If you exercise till you feel *tired out*, it will always do more harm than good.

When the body is very fat, drink little, eat less and work harder in the open air. While working wear a heavy, loosely *woven* woolen sweater. Take a cool sponge bath right after you exercise.

HEALTH HINTS.

Hundreds of health hints are used in the combine (No. 9). One that all should learn is health hint No. 1. In place of counting use a word for each count up to 16.

1. He-who-takes-the-home - drill - and - a - sponge - bath-each-day-does-a-WISE-THING.
2. Don't-you-take-a-cool-bath-when-tired-or-just-before-or -after-a-full-meal.
3. Make-a-habit-to-take-the-out-door-breathing-work-just-before-and-after-each-meal.

HOME DUMB-BELL DRILL, NO. 2.

1. Back Push.
2. Sternum Elevator.
3. Thigh Pushes.
4. Side Chest Opener ("A" Walls.)
5. Side Pushes.

6. Sternum Elevator and Side Chest Opener.
7. Forward Push.
8. Muscular Chest.
9. Vertical Push.
10. Dry Land Swim.
11. Flip.
12. Muscular Chest and Swim.
13. Combine 1, 3, 5, 7, 9 and 11.
14. Combine 2, 4, 8 and 10.
15. Cradle Rock.
16. Toe Yawn Stretch.

With the exception of Nos. 1, 3, 6, 12 and 14 this drill is the same as Home Drill No. 1.

1. POSITION.—Bells held in front of shoulders, elbows well back and front chest up. For Leg Positions see Home Drill No. 1. (1) Lower the bells to the floor, keeping knees straight. (2) Up in front of chest. (3) Push to back horizontal, passing the bells close under arm pits, and (4) return to front of shoulders.

3. POSITION SAME AS No. 1.—(1) Lower bells to the floor. (2) Up in front of chest. (3) Push down to side of thighs, and (4) up in front of chest.

REGULAR DUMB-BELL DRILL.—NO. 1.

FREE EXERCISE—DIV. I.

1. Open and shut fingers.
2. Wrist shakes.
3. Wrist extension.
4. Arm quivers.
5. Short circles.
6. Wind mills.
7. Milkman's slap.
8. Back of neck work.

9. Sternum expression.
10. Breathing exercise.
11. Breathing extension.
12. Massage.

LEG-WORK—DIV. II.

1. Raise on toes.
2. Raise on heels.
3. Combine 2 and 1.
4. Spread-eagle.
5. Roll shoulders back and down.
6. Squat quarter way down.
7. Squat all the way down.
8. Combine 6 and 7.
9. Hammers (front and side).
10. Pull string.
11. Spring-board jump.
12. Jump rope.
13. Stationary run.

BODY WORK—DIV. III.

1. Side push.
2. Sternum elevator.
3. Cradle rock.
4. Chop.
5. Shoulder-raiser.
6. Cut.
7. Liver-squeezer.
8. Flip.
9. Yawn stretch.
10. Forward push, vocal.
11. Side chest-opener.
12. Push to sides horizontals.
13. Muscular chest.

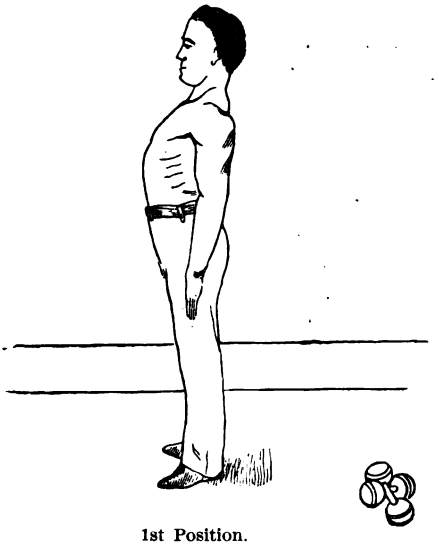
14. Vertical push.
15. Dry-land swim.
16. Combine on thirty-two counts.

ARM-WORK—DIV. IV.

1. Biceps—up hard.
2. Triceps—down hard.
3. Vocal—"Hello."
4. " —"Ah."
5. " —"Sh."
6. Combine 2 and 1.
7. Tricep swing.
8. Wrist twists.
9. Wrist curls.
10. Yawn stretch.

EXTENSION EXERCISE—DIV. V.

1. Forward sweeps, to toes and pass sides.
2. Strike behind hips, overhead and front of toes.
3. Strike behind heels, under chin and overhead.
4. Clavicular expression.
5. Reverse—"trapezius squeezer."
6. Strike behind hips, under chin.
7. Strike over head and under chin.
8. Combine 6 and 7.
9. Pull the string.
10. Repeat No. 7 and pull string.
11. Yawn stretch.



1st Position.

NOTES.

FREE EXERCISE.

POSITION.—(See cut.) Heels together, toes turned out, front chest out, shoulders back and down, head back, chin in, hands by the sides, fingers extended. Bells crossed on the floor. Each exercise in this drill should be done on sixteen or twenty-four counts.

1. Open and shut fingers strong; first, by side of thighs; next, hands out at side horizontals; next, hands at front horizontals; and last, high over the head. While the hands are over the head commence—
2. Wrist Shakes—Shaking the hands forward and back as fast as possible. Confine the movement to the wrist only. Return the hands to sides by taking the reverse order of positions, as in above exercise.
3. Keeping the fingers straight, bend the hands up as much as

possible, so that the palms will face up, then extend them. Follow the same changes of position of arms as in first exercise.

4. While the hands are at a high vertical swing them forward and backward about one foot. Put considerable power in this exercise with elbows stiff. Change to front horizontal, swinging them up and down; change to side horizontals and down to sides.

5. With the elbows stiff, make the hands describe short circles about eight inches in diameter. The right hand should circle in the same direction as the hand on a watch; the left hand in an opposite direction. Follow the same order of positions as in the first exercise.

6. While the hands are high above the head bring them together, crossing the arms in front of the face and carrying them down close to the body and up again, describing a full arm circle. After doing this eight or ten times reverse the circles.

7. Hands at side horizontals, palms facing to front. Bring them through front horizontal, crossing them and slapping them around the shoulders.

8. Hands back of head, fingers interlaced, head dropped forward, elbows close together. (1) Bring the head up and back, at the same time resisting the movement by pulling hard with the hands. (2) Pull the head forward again, offering the same resistance.

9. (See definitions).—Pushing out and raising the sternum and whole front chest.

10. Hands on sides of chest, elbows well back. Inhale deep and strong. Exhale. Inhale and exhale quickly. Inhale again and hold a few seconds.

11. Hands by thighs. Inhale slowly while raising the hands through side horizontals to vertical. Exhale as they are returning to sides. Inhale slowly while raising the hands through a front horizontal to a high vertical. Exhale as they are returning to sides. With the hands at a front horizontal, palms up, inhale slowly, bringing them to sides of chest, elbows back. Exhale as they return to front horizontal.

12. In last part of the above exercise, when the hands are on the sides of chest and the lungs full, slap the breast quickly a number of times.

LEG WORK.

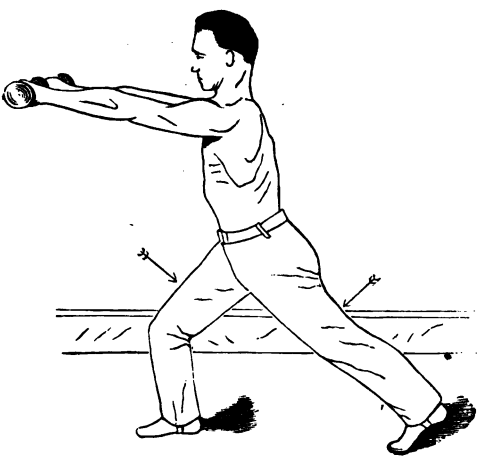
Take the bells in hands, holding them at side of thighs.

1. Raise high on toes.
2. Raise sharp on heels.
3. Combine Nos. 1 and 2.
4. With the feet together, raise the front of feet up and separate them considerably; back to position.
5. Roll the shoulders back, down and up, describing a perpendicular circle. (This movement should be done on two counts.)
6. As the squat is made raise on toes, bringing the weight of the body on the balls of the feet; spread the knees and let the hands hang by the hips.

Full Squat.

7. (See cut.) Squat close to floor, with shoulders back and down and front chest out.

8. Combine 6 and 7.
9. (See cut.) (See Leg Hammers.) (1) Raise on toes. (2) Return heels to floor. (3) Raise again on the toes, at the same



Front Hammer.

time stepping forward, first with the right foot, planting it firmly about two feet in front of the other foot. Side hammer—(1) Raise on toes. (2) Back again to position. (3) Raise on toes, at the same time step out to right side (turning a quarter way round) and plant the right foot about two feet to the right. (4) Back to position. Same to left side.

10. (1) Raise on toes. (2) Back square on feet. (3) Jump, separating the feet sideways, at the same time raising the arms to side horizontals. (4) Jump back to position.
11. Jumping with knees stiff as possible.
12. Jumping high, bending the knees.
13. Raise the heels up high in this run. (See Appendages to Stationary Run).

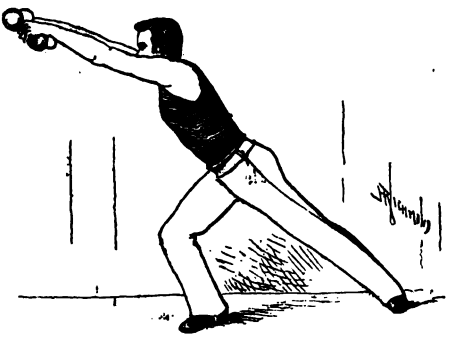
BODY WORK.

POSITION.—Feet spread, hands at sides.

Swing between legs.

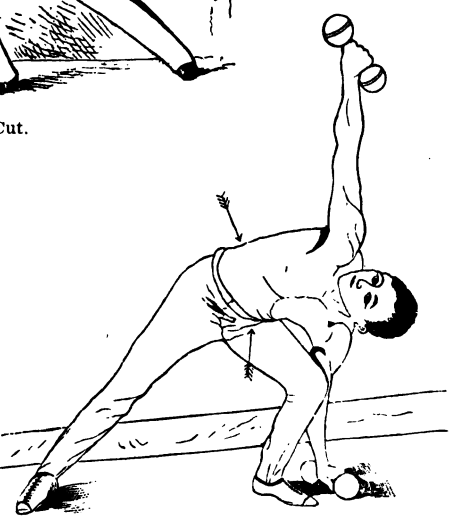
1. (1) (See cut.) Swing bells between legs, palms together; bend the back as much as possible, getting the head near the floor; bend the knees a little. (2) Bring bells up to front of shoulders, palms facing shoulders. Turn the body, first to the right (3) and push out strong. (4) Bring bells back to shoulders. Swing bells between legs again and push out to left side.
2. Bells high above the head, knuckles facing the front, arms close to ears. (1) Lower bells to front horizontal, reaching forward as far as possible without raising off the heels. (2) Separate bells to side horizontals, chest out. (3) Back easy to front horizontal; don't strike them hard, for it tends to develop those muscles that draw the shoulders forward. (4) Raise bells to a high vertical.
3. Position.—Bells at a high vertical, elbows straight, arms close to ears, chest out, chin in. Reach up as high as possible without raising off the heels. (1) Lean the body to the right at an angle of forty-five degrees, or an eighth of a circle; keep square on the feet. Rock toward the left side.
4. (1) Bring the bells from the right shoulder and swing between legs. (2) Raise up over left shoulder.

5. Bells at side of thighs. (1) Raise the arms to side horizontals. (2) Carry the bells under the arm-pits, keeping upper arms horizontal. (3) Carry bells back to side horizontals and (4) down to side of thighs.



Cut.

6. (1) Swing bells between legs. (2)(See cut.) Swing out to the right side, turning the body to the right and leaning it forward. Stretch the whole body. (Arms a little too high in the cut.)



Liver Squeezer.

7. (See cut.) Bell on top of each shoulder; upper arms side horizontals. (1) Lean the body to the left, at the same time raising the right bell to a high vertical and pushing the left bell on the floor. (2) Back to position. Up left, down right.

8. (1) Swing bells between legs and (2) up over the head and down back of neck. (3) Swing between legs and (4) up to high vertical.
9. While the hands are at high vertical raise up as high as possible, elongating the whole body.
10. (1) Swing bells between legs. (2) (See cut.) Bring them up in front of shoulders. (3) Push strong to front horizontal. (4) Bring back to shoulders.

Side Chest Opener.

11. (See cut.) Bells high above the head, elbows straight and arms close to ears. (1) Lower bells to side horizontals; (2) bring easy to front horizontal. (3) Swing back to side horizontals. (4) Up to high vertical. On last count of this exercise, as the bells are carried from side horizontal to high vertical, jump, bringing the feet together.
12. (1) Strike the floor hard in front of toes, knees straight. (2) Bring bells up to side of shoulders, elbows well back. (3) Push to side horizontal. (4) Back to shoulders.
13. Bells at side of thighs. (1) Raise to side horizontals. (2) Carry to front horizontal—don't strike them. (3) Swing back strong to side horizontals and (4) down hard to sides of thighs.

14. (1) Jump the feet apart, at the same time swinging the bells between legs. (2) Swing up to top of shoulders, at the same time jumping feet together. (3) Push to high vertical, arms close to ears. (4) Down to top of shoulders.
15. (1) Raise bells to front horizontal. (2) Swing to side horizontals, at the same time stepping forward, planting the right foot firmly about two feet in front of the left. (3) Bring bells to front horizontal, and at the same time step back to position. (4) Bells to sides of thighs.
16. Combine all exercises of the third division that calls for the bells going to the floor, viz., 1, 4, 6, 8, 10, 12 and 14.

ARM WORK.

1. (See definitions.) Bells in front of thighs, palms facing front. (1) Carry the bells up in front of shoulders, holding upper arms close to chest. (2) Down to thighs. Emphasize odd counts.
2. (See Definitions.) Bells in front of shoulders, hold upper arms close to the chest. (1) Lower bells down by side of thighs. (2) Raise them to front of shoulders. Emphasize odd counts strong.
3. Repeat the above exercise, using the vocal expression "Hello" on odd counts.
4. Repeat, using the syllable "Ah."
5. Repeat, using the syllable "Sh."
6. Combine 1 and 2.
7. (See definitions.) Bells in front of shoulders. (1) Swing the bells down and out in front of the body, and down past the thighs and behind hips. (2) Up in front of shoulders. Keep the bells the same distance apart. Do not drop the head and shoulders forward when the bells are swung behind hips.
8. Bells at sides of thighs, palms facing front. (1) Twist forearms so that palms face to the rear. (2) Twist back to position. Do this exercise on about five counts, changing the position of the arms in the order given in first exercise of first division.

9. Bells at sides of thighs, palms facing thighs. (1) Bend the wrists toward thighs, so that palms face up. (2) Extend the wrist. Make the same order of arm positions as in No. 8.
10. While the hands are at high vertical reach up as far as possible, stretching the whole body.

EXTENSION EXERCISES.

1. Bells high above the head. (1) Lower the bells to toes, reaching forward as far as possible without raising off the heels. (2) Raise them over the head again, reaching out as far as possible. (3) Lower them in front of the chest and down past thighs, elbows stiff. (4) Raise over head again.

Strike bells behind back.

2. (1) (See cut.) Lower the bells down through side horizontals, and strike their ends together hard behind the hips, palms facing rear. Shoulders well back. (2) Raise them through side horizontals, and strike them hard at a high vertical, palms facing front. (3) Lower them through side horizontals and strike hard in front of toes—knees stiff. (4) Raise them to high vertical.

3. (1) Lower bells through side horizontals, and strike them together hard behind heels—knees stiff. (2) Raise them up and strike them in front of chin, palms facing chin. (3) Strike them together at a high vertical.
4. (See definitions.) Bells in front of shoulders. (1) Strike them together hard in front of chin, and carry them in front of shoulders again.
5. Ends of bells together in front of chin, palms facing chin. (1) Separate them to sides of shoulders, palms facing to front. (2) In front of chin. Emphasize second count.
6. (1) Strike bells behind hips, palms facing to rear. (2) Strike them in front of chin, palms facing chin.
7. (1) Raise the bells to a high vertical and strike together hard. (2) Strike in front of chin.
8. Combine 6 and 7.
9. Ends of bells together in front of chin, palms facing chin. (1) Jump feet apart. (2) Jump feet together.
10. (1) As the feet separate strike the bells at high vertical. (2) As the feet are brought together strike bells in front of chin. If this exercise is done on sixteen counts, on count "fifteen" the legs will be separated and bells overhead; on count "sixteen" jump feet together, holding the bells over the head.
11. With the hands high over the head, stretch the whole body, raising high on the toes.

LAY-DOWN DUMB-BELL DRILL.

1. Raise feet to a vertical.
2. Raise bells to a vertical.
3. Alternate 1 and 2.
   (Change hands to side horizontals.)
4. Pull string with legs.
5. Clavicular exercise.
   (Change hands to back horizontals, arms close to ears.)
6. Alternate 4 and 5.
7. Knees to sternum.
8. Muscular respiratory chest exercise.
9. Alternate 7 and 8.
10. Second part of first bell extension exercise.
    (See fifth div. of bell-drill.)
11. First part of second bell extension exercise.
12. Alternate 10 and 11.

NOTES.

Use bells weighing from four to six pounds. Inflate the lungs on all extension work where the hands leave the body. If this exercise is done in a gymnasium, it should be on the abdominal mat, or a large class may do it on a long mat. This drill is a fine thing for home work.

POSITION.—Lie flat on mat, with hands by the thighs and on bells; knees stiff, and toes pointed; hips, bells, head and shoulders down firm on mat.

1. Raise feet to a vertical and let them return to the mat easily.
2. Keep the knuckles turned toward inside of forearms.
4. Raise the heels two inches off the floor, and separate the legs as far as possible. Back again to position. Knees stiff, toes extended.
5. Bring bells together hard, directly over the chest. Let them back easy. Elbows straight.
7. Bend the legs, bringing knees up to sternum, heels close to mat.
8. Bring the bells up to a vertical, slide arms close to ears, knuckles turned toward inside of forearms. Back to position.
10. Raise the bells up over and past the head and down to mat beside of thighs. Back again.
11. Separate the bells, carrying them around to side of thighs, keeping arms two inches off the mat.

Leg work of this drill affects the lower third of the body. The arm work is a good change when using the abdominal mat exercise. If mat is raised about six inches above the floor this drill will be more beneficial.

Each exercise should be done ten times.

When the class becomes familiar with this work, the leader, instead of saying "ten" or "hold," should name the next exercise, and go right along with each exercise through the series.

BAR-BELLS, OR WANDS—Series No. 1.

Length of Wands.—Different lengths; from 4 feet to 4 feet 6 inches.

The same exercises as the first series of Pulley Weights, and is sometimes called the Pulley Weight Wand Drill.

First Ending.—Instead of Turning the palms on top of shoulders curl the hands under the armpits, holding the wand tightly.

Third Ending.—Separate the hands, sliding them to ends of Wand.

BAR-BELLS, OR WANDS.—Series No. 2.

1. To armpits, to side of R. ankle. To left. Add Front Oblique Hammer.
2. To armpits, to side of R. thigh. To left. Add Back Hammer.
3. To armpits, to right side horizontal. To left. Add No. 2 Side Hammer. [See Leg Hammer.]
4. To armpits, to front of ankles. Add Front Hammer.
5. To armpits, to front of thighs. Add No. 1 Side Hammer.
6. To armpits, to high vertical. Add Back Hammer.

COMBINATIONS.

1. Ankle combinations. Right and left.
2. Thigh combinations. Right and left.
3. Side horizontal combinations. Right and left.
4. Front of ankles to front of thighs.
5. Front of thighs to front horizontal.
6. Front horizontal to high vertical.
7. Count to 20, third time stop back of neck.
8. Thigh work of Dumb-Bell Drill.

NOTES.

POSITION.—Grasp the wand tightly, hands about fourteen inches apart, and hold at front horizontal. (See cut of position in first series of Chest Weights.)

1. (1) Bring wands close against chest, curling the hands and wrists near the armpits. (2) Twist the body and push the wand down by the side of right ankle. (3) Back to armpits, and (4) Push to front horizontal. Same to left.
2. (1) Bring hands to armpits, and (2) Push down by side of right hip without bending the body down. (3) Back to armpits, and (4) Push to front horizontal. Same to left.

Practice each exercise on sixteen counts.

After the class has become familiar (not before) with this drill add the hammers on the second movement of each exercise; e. g., Ex. 1, as the wand is carried from the front chest to the right ankle step out diagonally to the right. Step back as the wand is carried to the front chest

BAR-BELLS, OR WANDS.—SERIES NO. 3.

1. Load the Cannon. Add Back Hammer.
2. The Paddle. Add No. 1 Side Hammer.
3. The Cut. Add No. 2 Side Hammer.
4. The Churn. Add Front Hammer.
5. The Heroic. Add Front Hammer.
6. Anti-Bilious Pill. Add No. 1 Side Hammer.
7. Spinal Vertical. Add Back Hammer.
8. To toes, to behind hips.
9. From behind hips, to front of thighs.
10. Combine.
11. To toes, to behind hips. Add Front Hammer.
12. From behind hips, to front of thighs. Add Back Hammer.
13. Combine on 17 counts. Bring wand to the front of thighs.
14. The sixteen count to Toe Yawn Stretch.

NOTES.

Practice each exercise first on the right side of the body, then on the left, and last alternate on each side.

Become familiar with the first part of the exercises before trying to add the hammers to each one. Keep the elbows as stiff as possible in all the exercises.

POSITION.—Feet together toes turned out; hands grasping the wands tightly about twelve inches apart; wands against front of thighs.

1. Raise the wand a little to the right side and thrust it *hard* behind the right hip eight or ten times, then behind the left hip.
2. Holding right hand in front of thigh, bring the left hand up in front of right shoulder eight times.
3. Bring the right hand out to a right side horizontal with the left hand above it, the wand being perpendicular and both elbows straight: return to front of thighs.
4. Raise the left hand in front of, and a little higher than the head; this will bring the right hand in front of the chest. Both elbows straight. Now push down *hard* about a foot and up again, and down to position. (One movement.) Raise the right hand a little above and in front of the head, etc.
5. Raise the wand and thrust it over the head, elbows straight, the right hand in front and the left hand behind. Raise it again with the *left* hand in front.

RECIPROCATE.—Raise the wand over the head to a horizontal, elbows stiff. Turn it so as to bring the right hand in front and the lelt to the rear, and vice versa several times with considerable force.

6. Grasp the wand at the ends, raise it over the head, parallel with the shoulders, elbows straight. Lean the body to the right, straighten up and bring wand down to position. Raise wand again over the head, and lean the body to the left and back to position. Reciprocate—with the wand held over the head, rock the body laterally, as in "cradle rock" of Bell Drill.
7. Raise the wand, separating the hands to the ends of it, and bring the left forearm over the head and the right hand behind the back. At this position the wand will be vertical and parallel with and near to the spine.

8. DISLOCATE.—Lower the wand to toes, and up over the head, keeping elbows stiff and sliding the hands to the ends of wand, and lower it behind the back to back of hips.
9. DISLOCATE.—Starting from behind hips, raise the wand over the head and down in front of thighs.
11. Same as No. 8 and adding front hammer when the wand is lowered to the floor.
12. Add back hammer when the wand is carried from front of thighs to behind hips.

The Spinal Vertical raises the side walls of the chest in the same way that the "Giant Pulley Special" does, on giant pulley. If one side of the chest is sunk in more than the other, use exercises 6 and 7 a third more times on the weak side, as special home work.

In exercises 7 to 13, slide the hands to the ends of wand as the exercise is being done. For study nights, this drill is the most useful, as heedless members will make a sad botch of it. To receive the most good from this drill, run it on slow time and attend very carefully to all its little details.

Many of the other leg exercises can be used with this series—dig them out.

CHEST WEIGHTS—Series No. 1.

MOVEMENTS.

1. Pull to toes.
2. By side of thighs.
3. Pull to high vertical.

COMBINATIONS.

1. Combine movements 1 and 2.
2. Combine movements 2 and 3.
3. Combine movements 1 and 3.
4. Combine movements 1, 2 and 3.
5. Combine movements 1, 3, 2 and 3.

ENDINGS.

1. First Ending.
2. First movement, first ending.
3. Second movement, first ending
4. Third movement, first ending.
5. First sandwich.
6. Second Ending.
7. First movement, second ending.
8. Second movement, second ending.
9. Third movement, second ending.
10. Second sandwich.
11. Third Ending.
12. First movement, third ending.
13. Second movement, third ending.
14. Third movement, third ending.
15. Third sandwich.

HAMMERS.

1. Movements 1 and 3, back hammer.
2. First sandwich, †No. 1 side hammer.
3. Second sandwich, †No. 2 side hammer.

4. Third sandwich, †front hammer.
5. Third sandwich, †pull the string.

†See Leg hammers.

NOTES.

For class work, each of these exercises should be gone through on about sixteen counts, except the fourth combination, which will end on eighteen counts. Also the three sandwiches, which will have to be practiced on eighteen or twenty-four counts.

(See Y. M. C. A. *Watchman*, December 15, 1888.)

POSITION.—(See cut.) Grasp the handles firm, palms down, elbows straight, and hold at a front horizontal. Feet spread about eighteen inches. Hold the weights off the floor. Head up, chin in and knees stiff.

MOVEMENTS.

First—(See cut.) Bring hands down to toes, keeping elbows and knees straight. Up again. Second—(See cut.) Pull handles down past sides, chest out, back to position. Third—(See cut.) Pull up to a high vertical, letting the arms rub the ears as they reach the highest limit. Down again.

COMBINATIONS.

ENDINGS AND SANDWICHES.—(1) Bring handles to top of shoulders, twisting fore-arms so that the palms will be down when the handles are over the shoulders. Keep the upper arms immovable, as though resting on a shelf. (2) Arms front horizontal. Add the first, second and third movements to this ending separately.

FIRST SANDWICH.—(These sandwiches are the combinations of the first and third movements and the different endings.) (1) Combine the first movement, (2) first ending and (3) the third movement.

SECOND ENDING.—(1) Turn the body on the hips a quarter way to right, at the same time bringing the hands around in front of the body, and turning the palms to face each other when at a full quarter turn. (2) Back to position. The same on left side.

SECOND SANDWICH.—(1) First movement, (2) second ending to right, (3) third movement, (4) first movement, (5) second ending to left, and (6) third movement.

THIRD ENDING.—(1) Separate the hands to side horizontals, at the same time turning the palms to face front. (2) Back again to front horizontal.

THIRD SANDWICH.—(1) First movement, (2) third ending and (3) third movement.

HAMMERS.

1. (1) First movement, (2) position, (3) third movement and back hammer with right foot, (4) back to position.
2. When making the side hammer (see leg hammers) add the first sandwich.
5. Position—Feet together (1) pull the string and first movement, (2) position, (3) pull string and third ending, (4) position, (5) pull string and third movement, (6) position.

CHEST WEIGHTS—SERIES NO. 2.

BACK TO PULLEYS.

I. SIT DOWN BENT ARM WORK.
   1—Position—Palms next to and facing shoulders.
   2—Back of hands next to shoulders.
   3—Combine 1 and 2.

II. SIT DOWN STIFF ARM WORK.
   1—Position—Hands at high vertical, palms front.
   2—Position—Hands at high vertical, palms back.
   3—Combine 1 and 2.

III. ABDOMINAL STIFF ARM WORK.
   Positions same as in part II.

IV. VERTICAL BACK BOARD WORK.
   1—Raise on toes.
   2—Quarter way down.
   3—Combine 1 and 2.
   4—All the way down.

5— Raise on toes and squat.
6—Raise on toes and front hammer.

V. Stand Bent Arm Work.
1—Position—Palms on shoulders.
2—Position—Knuckles on shoulders.
3—Combine 1 and 2.

VI. Stiff Arm Work.
1—Position—Hands down and back, palms front.
2—Position—Hands down and back, palms back.
3—Combine 1 and 2.
4—Position—Hands at front horizontal, palms facing.
5—Position—Hands at front horizontal, palms down.
6—Combine 1 and 4.
7—Combine 4 and 5.
8—Combine 1 and 5.
9—Combine 1, 4 and 5.

VII. Stiff Arm Work, Raise on Toes.
Positions and combinations the same as in Part VI.

VIII. Third sandwich and front hammer of 1st series.

NOTES.

To practice the exercises in parts I, II and III, there should be a detachable seat attached to this board which could be removed when not in use.

To practice the exercises in Part IV, there should be an upright board between and a few inches in front of the pulley ropes, reaching from the pulley wheels to the floor.

Practice the exercises of this series on sixteen counts. Do not use this series more than one-third as much as the first. Use two-thirds more pounds of weights in the first series than in this. Four to six-pound weights should be used.

PART I.—Keep the arms close to sides of chest.

(1) Bring the fore-arms down past the legs to lock and back again.
(2) Same exercise with the hands reversed.
(3) Reverse the hands when in front of shoulders.

PART II.—The arms close to the ears.

(1) Bring hands down between the legs and return.
(2) Same exercise, hands reversed.
(3) Reverse the hands when over the head.

PART III.—The back should be two inches from the back board. The same exercise as in part II. Persons with large waists should practice this part of this series for special work.

PART IV.—Drop the weights, remove the seat from the upright board, and stand with shoulders, hips and heels against this board. While raising on toes or squatting, keep these three parts of the body slightly touching the board.

PART V.—With the pulley weight handles in hands, stand about three feet from the upright board. Feet together, upper arms horizontal and elbows pointing to the front.

(1) Straighten fore-arms to front horizontal.
(2) Straighten fore-arms to front horizontal.
(3) Reverse hands when on top of shoulders.

PART VI.—Hands down and back past hips.

(1) Bring hands up to front horizontal.
(2) Bring hands up to front horizontal.
(3) Reverse hands when back of hips.
(4) Separate hands to side horizontals.
(5) Raise hands to high vertical.
(6) Combine 1 and 4. Start with hands behind hips. Combine on sixteen counts. On sixteenth count the hands will be going from front horizontal to behind hips. Use the word "change" when carrying the hands from behind hips to front horizontal, which will bring them in position for second combination.
(7) Combine 4 and 5 on sixteen counts. On count "fifteen" the hands are over the head. Use the word "change" when carrying the hands down and back of hips—don't stop at front horizontal.

(8) Combine 1 and 5. Carry the hands up through a front horizontal to a high vertical on one count—don't stop at horizontal while going up or coming down. Palms facing front when behind hips and high over head; reverse them while going through front horizontal. Use the word "change" on count sixteen.

(9) Combine 1, 4 and 5. Alternate No. 4 with 1 and 5.

PART VII.—The same exercise as in part VI. Raise on toes on all odd counts except the 5th exercise. Do not raise on toes when carrying the hands to high vertical.

PART VIII.—Turn about, facing the chest weights. As the work in parts VI and VII tends to develop those muscles that draw the shoulders forward, there should be given work to counteract this, which is the third ending of the first series, or the third sandwich and front hammer. This exercise should be done on fifty counts.

CHEST WEIGHTS—SERIES NO. 3.

SINGLE ARM EXERCISE.

PART I.

1. Pull behind hips.
2. Pull to side of right thigh.
3. Pull to front of right thigh.
4. Pull to front horizontal.
5. Pull to high vertical.
6. Curl to top of R. shoulder.
7. Curl to L. breast.

PART II.

1. Combine 1 and 2.
2. Combine 2 and 3.
3. Combine 3 and 4.
4. Combine 4 and 5.
5. Combine curl to top of R. shoulder and L. breast.

PART III.

Combine the curl to top of shoulders with 1, 2, 3, 4 and 5 movements.

PART IV.

Combine the pull behind waist with 2, 3, 4 and 5 movements.

PART V.

1. Combine movements 1, 2, 3, 4, 5, 6 and 7—14 counts.
2. † Deltoid count to 16. Combine the pull to vertical with 1, 2, 3 and 4 movements.
3. † Deltoid count to 24. Combine the pull to vertical with 1, 2, 3, 4, 6 and 7 movements.
4. † Bicep count to 20. Combine the curl to top of shoulder with 1, 2, 3, 4 and 5 movements.
5. † Pectoral count to 20. Combine curl to opposite breast with 1, 2, 3, 4 and 5 movements.
6. Combine pull to toes with 1, 2, 3, 4, 5, 6 and 7—28 counts.

† See definitions.

NOTES.

Each part of this series should be done, first with right hand then with left.

POSITION.—Right side of body toward weight. Right hand grasping handle tightly, and arm at side horizontal. Elbow stiff, palm down. Shoulders same height, and square to front, holding them firm. Left hand on hip, fingers in front, elbow point to rear. Feet about fifteen inches apart.

Do the work easily, pull rope smoothly over pulleys, no jerky motions. This way of working localizes the action, bringing into play the muscles it was designed to develop. In all straight-arm exercises keep elbows stiff and reach to full stretch limit of movement.

In movement Number 6 of Part I., the upper arm should be kept stationary, as though resting on a shelf.

In single-arm exercises, use twice the amount of weights as when using both arms.

DEVELOPMENT.—Upper front arms mostly; top of shoulders, upper trapezius, and strengthens loins.

PART I.—No. 1, Action chiefly on back chest. 2, Back and front chest. 3, Lower front Chest. 4, Upper front chest. 5, Top of shoulders, upper trapezius, and raises side walls. 6, Upper arm. 7, Pectoral and back arms. All seven movements, except No. 5, strong action on back arm.

6. Bring hand to top of shoulder, turning forearm so that the palm will face down.
7. Bring the right hand to the left breast, with arm close to the body.

PART V.—(2) Pull-to-vertical alternation. Deltoid is the muscle on top of the shoulder and upper arm, the action of which is to raise the arm to a side horizontal. (4) The curl-to-top-of-right-shoulder alternation. (5) The pull-to-left-breast alternation.

CHEST WEIGHTS—Series No. 4.

FRONT SHOULDER WORK.

1. Pull from behind hips to side horizontal. Palms in.
2. Pull from behind hips to side horizontal. Palms out.
3. Alternate 1 and 2.
4. Raise from side horizontal to high vertical.
5. Combine 1 and 4.

NOTES.

Practice these exercises first with the right hand, then with the left. Same hints to be followed as in series No. 3. Do not let the shoulders droop down or raise up while doing the exercises.

The front shoulder tricep and deltoid muscles are the parts strongest acted upon.

Do the most work with the weakest arm. In this series use the right arm first.

1. Position of hand—palm face the weights.
2. Position of hand—palm face to the right; little finger next to body.
4. Start with palm down.
5. With the elbow straight; carry the handle down past the thighs and out through the right side horizontal, and up to a high vertical in one movement.

CHEST WEIGHTS—Series No. 5.

BACK SHOULDER WORK.

1. Pull down in front of thighs to side horizontal. Palms in.
2. Pull down in front of thighs to side horizontal. Palms out.
3. Alternate.
4. Pull through front horizontal to side horizontal. Palm in.
5. Pull through front horizontal to side horizontal. Palm out.
6. Alternate.
7. Raise through high vertical and down to side horizontal.
8. Alternate 1 and 4.
9. Alternate 4 and 7.
10. Alternate 1 and 7.

NOTES.

Use this series, first with right hand then with left.

1. Position.—Stand with left side next to weight. Handle of weight in right hand, little finger next to body, arm in front of body. Carry handle down in front of thighs and out to right side horizontal, arms straight. Return to position.
4. Right arm in front of body. Hand holding handle as in first exercise. Carry the handle through a front horizontal to right side horizontal, arms straight. Back to position.
7. Raise right hand up through a high vertical and down to right side horizontal and return. As the handle is carried down to right side horizontal allow the rope to come down in front of face and touch the front chest.

Same rules govern the positions of the body as in series 3 and 4.

Don't bend elbows or pull the rope with a jerk.

This work will cover the shoulder blades with proper amount of muscle to bind them down close to the ribs, thereby correcting round shoulders.

The back arms and back shoulders are brought into play by all these exercises.

No. 4 brings loins and small of back into moderate action. Always use back shoulder work after front work.

HEIGHT JUMPS—Series No. 1.

1. Lib-Lob Leap, to right, lead with left foot.
2. Lib-Lob Leap, to left, lead with right foot.
3. Lib-Lob Leap, to right, lead with right foot.
4. Lib-Lob Leap, to left, lead with left.

*5. †"L" Jump to right. To left.

*6. †"L" Jump to right, strike heels. To left.

*7. †"L" Jump to right, touch toes. To left.

*8. †"L" Distance Jump to right. To left.

*9. †"L" Distance Jump to right, outside quarter turn. To left.

*10. †"L" Jump to right, outside half turn. To left.

*11. †"L" Distance Jump to right, inside quarter turn.

*12. †"L" Jump to right, inside half turn. To left.

*13. Jump to right, thigh bicep expression. To left.

*14. Jump to right, †Heel Aerial.

15. Jump to right, thigh bicep expression, land hands back of head. To left.

16. Jump to right, thigh bicep expression, land hands side horizontal. To left.

*17. Right side hop from right foot. Left foot.

*18. Left side hop from left foot. Right foot.

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*Land with hands out front horizontal.
†See definitions.

NOTES.

Jump from first spring; don't make a double jump. Whenever *possible* land from the jump with hands held at front horizontal, for it puts an action on the back that almost every one needs.

Height of stick should be from 1½ to 2½ feet.

All the series of light jumps will increase one's activity and greatly aid in strengthening the abdominal muscles and those of the thighs and legs. So those that are weak in these parts should use the leg work of the lay-down dumbbell drill, also the abdominal mat.

1. Lib-lob, or hitch-kick leap to right. Start from left foot, leaping sideways to the right, throwing first the right foot over pole and landing on right foot.

5 to 12. Keep knees straight.

6. Strike knees with hands when the body is over the pole.

9. Turning one quarter way to the right.

11. Turning one quarter way to the left.

13. Jump, bringing the trunk of the body, thighs and legs at right angles with each other, so that when the body is above the pole it will be in the position as when sitting square in a chair.

HEIGHT JUMPS—Series No. 2.

*1. †"L" Jump to right. To left.
*2. Jump to right, strike knees. To left.
*3. Jump to right, touch toes. To left.
*4. †"L" Distance Jump to right. To left.
*5. Jump to right, thigh bicep expression. To left.
*6. Jump to right, †Heel Aerial. To left.
7. Jump to right, thigh bicep expression, land hands back of head. To left.
8. Jump to right, thigh bicep expression, land hands side horizontal. To left.
9. Jump to right, thigh bicep expression, land hands yawn stretch. To left.
10. Lib-Lob Leap to right and repeat. To left.
*11. Lib-Lob †"L" Jump to right and repeat. To left.
*12. Jump to right, strike knees and repeat. To left.
*13. Jump to right, strike toes and repeat. To left.
*14. Jump to right, †Heel Aerial and repeat. To left.
15. Jump to right, outside half turn and touch-toe jump. To left.
*16. Right side hop from right foot and repeat. L. side.
*17. Right side hop from left foot and repeat. L. side.

*Land on mat with hands at front horizontal.
†See definitions.

NOTES.

See first series.

2. Strike the knees when the body is over the pole and thighs at right angles with the body.
3. Keep the knees straight. Try to touch the toes as the body is above the pole.
10. Start from left foot (right side next to pole). Leap over pole, landing on right foot; before left foot touches mat throw it back over the pole and land on it.
16. Jump over pole, turning to right, landing about face; jump back again touching toes.

HEIGHT JUMPS—SERIES No. 3.

*1. Front Jump.
*2. Front Distance Jump.
*3. Front Distance Jump, land on right foot.
*4. Front Distance Jump, land on left foot.
*5. Front Hop, right foot.
*6. Front Hop, left foot.
7. Front Jump, land hands side horizontal.
8. Front Jump, land hands front horizontal.
9. Front Jump, land hands high vertical.
10. Front Jump, land hands back of head, elbows in front.
11. Front Jump, land hands back of head, elbows apart.
12. Front Jump, land arms folded on small of back.
13. Front Jump, land hands on hips, elbows back.
14. Front Jump, land pull string.
15. Front Jump, land quarter turn to right, pull string.
16. Front Jump, land quarter turn to left, pull string.
17. Front Jump, land half turn to right, pull string.
18. Front Jump, land half turn to left, pull string.
19. Front Jump, land full turn to right.
20. Front Jump, land full turn to left.
*21. Front Jump, Distance Jump and "L" Scissors.
*22. Front Jump, Distance Jump and Scissors.
*23. Front Jump, Distance Jump and Thigh Bicep Expression.
*24. Front Jump, Distance Jump and Heel Aerial.
25. Front Jump, Distance Jump, hands back of head, elbows in front.
26. Front Jump, Distance Jump, hands high vertical.
*27. Back Jump.
*28. Back Jump, quarter turn to right.

*Land with hands at a front horizontal.

*29. Back Jump, quarter turn to left.
*30. Back Jump, half turn to right.
*31. Back Jump, half turn to left.
32. Front Distance Jump, two Roll-Overs.
33. Two † Funny Post Frog Jumps.
34. Two † Frog Jumps.
35. Dive over stick, Roll-Over.
36. Back Jump, half turn to right, Roll-Over.
37. Back Jump, half turn to left, Roll-Over.
38. Back Jump and Back Roll-Over.

*Land with hands at a front horizontal.
†See definitions.

NOTES.

In jumping, lean a little forward and spring from the balls of both feet. In landing, bend the knees slightly to avoid the sudden jar to brain and spinal cord, also lean a little forward to be ready to make another jump (if called for), with hands back past the hips. In all the jumps of this series, start from a stand.

27. When jumping backwards, swing the arms back at the same time. When making several back jumps, land with the arms back of the body and quickly bring them to the front.

35. Jump, raising the feet the height of the head and landing on the hands, with the body almost perpendicular; and add the front roll-over.

MEDICINE BALL.

Stand about eight or ten feet apart. Four men in a class is all that can work profitably. This exercise should be practiced out of doors.

1. Throw from front of toes.
2. Throw from front of thighs.
3. Push from sternum.
4. Throw from high vertical.
5. Throw from side of right thigh.
6. Throw from side of left thigh.
7. Throw from right side horizontal.
8. Throw from left side horizontal.
9. Throw from side of right thigh with right hand.
10. Throw from side of left thigh with left hand.
11. Throw from right side horizontal with right hand.
12. Throw from left side horizontal with left hand.
13. Throw from high vertical with right hand.
14. Throw from high vertical with left hand.
15. Put the shot from right shoulder.
16. Put the shot from left shoulder.
17. Swing from between legs and push from sternum.
18. Swing from between legs and throw from behind back.
19. Swing from between legs and throw from high vertical.
20. Quick twist pushes from sternum.

NOTES.

Keep the elbows straight in all exercises, except Nos. 3, 15, 16 and 20.

Keep the heels on the ground in all exercises, except Nos. 15, 16 and 20.

Use both hands in the first eight and last six exercises.

Most every important set of muscles above the hips, save the respiratory muscles, are brought into the strongest action by the medicine ball.

The ball should be 12 inches in diameter. Made of heavy leather. It should be filled with felt and heavy strings twisted together. Weight 8 to 10 pounds.

18. Throwing the ball up from between legs, catching it behind the back, and throw.

20. As the ball is pushed from the sternum give it a quick twist. This will make it hard to hold by the catcher.

Always use some exercise that will act on the inspiratory muscles after this exercise, viz., 3d sandwich of pulley weights, Dry Land Swim, and scoops on whole-waist developer.

INDIAN CLUBS—Series No. 1.

1. Ulna Slap.
2. Ulna Circle.
3. Radial Slap.
4. Radial Circle.
5. R. Club Windmill down through R. side horizontal.
6. L. Club Windmill down through L. side horizontal.
7. Both Club Windmills down through R. and L. side horizontal.
8. Wrist Extensions at side horizontal.
9. Wrist Extensions at front horizontal.
10. Wrist Extension at high vertical.
11. R. Club Windmill down through L. side horizontal.
12. L. Club Windmill down through R. side horizontal.
13. Both Club Windmills down through R. and L. side horizontal.
14. Table Exercise at side horizontal.
15. Table Exercise at front horizontal.
16. Both Club Windmills down through R. side horizontal.
17. Both Club Windmills down through L. side horizontal.

NOTES ON INDIAN CLUBS—Series No. 1.

The majority of the exercises with the Indian clubs develops the muscles of the hands, wrists, fore-arms, and top of shoulders. Practice each exercise on 8 or 12 counts.

1. Hands by side of thighs, grasping clubs close to the knobs of the handles between thumbs and root of forefingers. Clubs pointing to a point on the floor a few inches behind the heels. With the fingers (1) raise the clubs up firmly against back of fore-arms (next to ulna bone), and (2) down again. Keep the hands close by the side of thighs.
2. Hands by side of thighs, grasping clubs as above, and holding them horizontally, belly ends of clubs pointing to the rear. (1) Bring the large ends of clubs around to the front, carrying them on a horizontal plane. (2) Back again to the rear.
3. Hands by side of thighs, grasping clubs close to the end of handles, clubs pointing to the floor in front of toes. (1) Raise the clubs up firmly against the front of fore-arms (next to radial bone), keeping the fore-arms immovable. (2) Back again.
4. Hands by side of thighs, grasping clubs as above and holding them at a horizontal, belly end of clubs pointing to the front. (1) Separate their large ends, carrying them around on a horizontal plane to the rear. (2) Back again.
5. Clubs together and held at a high vertical. (1) (See cut over 3d Series.)—Lower the right club out and down through a right side horizontal and up through a left side horizontal to a high vertical—arm straight.
6. Opposite circle to the above.
7. Clubs at a high vertical. Separate them—the right club down through a right side horizontal and up through a left side horizontal; the left club down through a left side horizontal and up through a right side horizontal.
8. Hold right club out at right side horizontal and left club at left side horizontal, large ends of clubs pointing away from body. (1) Without moving the arms raise the large ends of clubs up and let them fall on the fore-arms. (2) Return them to first position.

9. Same movement as above with arms extended in front of body.

10. Clubs held at a high vertical. (1) Let the large ends fall to fore-arms, and (2) raise again.
11. (See cut over 3d Series.)—Opposite circle to No. 5.
14. Arms extended as in No. 8. Hold the clubs perpendicular, large ends of clubs pointing up. (1) Let the large ends of clubs fall back—describing a half circle—by twisting the arms and wrists. (2) Raise the ends of clubs again and let them fall down on opposite side of hands—describing a full circle.
16. Keep the clubs together.

1st Position, and Forward Outside Circle.

INDIAN CLUBS--SERIES NO. 2.

SHORT CIRCLES.

PART I.—ARMS AT SIDE HORIZONTALS.

1. Forward outside circle at right side horizontal.
2. Forward outside circle at left side horizontal.
3. Forward inside circle at right side horizontal.
4. Forward inside circle at left side horizontal.
5. Combine 1 and 3 at right side horizontal.
6. Combine 1 and 3 at left side horizontal.
7. Back outside circle at right side horizontal.
8. Back outside circle at left side horizontal.
9. Back inside circle at right side horizontal.
10. Back inside circle at left side horizontal.
11. Combine 7 and 9 at right side horizontal.
12. Combine 7 and 9 at left side horizontal.
13. Forward R.-side-of-arms circle at R. side horizontal.
14. Forward R.-side-of-arms circle at L. side horizontal.

15. Forward L.-side-of-arms circle at R. side horizontal.
16. Forward L.-side-of-arms circle at L. side horizontal.
17. Combine 13 and 15 at right side horizontal.
18. Combine 13 and 15 at left side horizontal.
19. Backward right-side-of-arms circle at R. side hor'l.
20. Backward right-side-of-arms circle at L. side hor'l.
21. Backward left-side-of-arms circle at R. side hor'l.
22. Backward left-side-of-arms circle at L. side hor'l.
23. Combine 19 and 21 at right side horizontal.
24. Combine 19 and 21 at left side horizontal.
25. Horizontal circle above arms, R. to L., at R. side hor'l.
26. Horizontal circle above arms, R. to L., at L. side hor'l.
27. Horizontal circle below arms, R. to L., at R. side hor'l.
28. Horizontal circle below arms, R. to L., at L. side hor'l.
29. Horizontal circle above arms, L. to R., at R. side hor'l.
30. Horizontal circle above arms, L. to R., at L. side hor'l.
31. Horizontal circle below arms, L. to R., at R. side hor'l.
32. Horizontal circle below arms, L. to R., at L. side hor'l.
33. Combine 25 and 27 at right side horizontal.
34. Combine 25 and 27 at left side horizontal.
35. Forward inside circle with L. club and back outside circle with R. club at R. and L. side horizontals.
36. Forward outside circle with L. club and back inside circle with R. club at R. and L. side horizontals.

PART II.—BEHIND SHOULDERS.

1. Outside circle behind shoulders, R. hand. (See cut.)
2. Outside circle behind shoulders, L. hand.
3. Alternate circle behind shoulders, each hand.
4. Combine circle behind shoulders, both hands.
5. Inside circle behind shoulders, R. hand. (See cut.)
6. Inside circle behind shoulders. L. hand.
7. Alternate circle behind shoulders, each hand.

8. Combine circle behind shoulders, both hands.
9. Combine R. Club outside circle and L. club inside circle.
10. Combine L. Club outside circle and R. club inside circle.

PART III.—BEHIND HIPS.

1. Inside circle behind hips, R. club. (See cut.)
2. Inside circle behind hips, L. club.
3. Inside circle behind hips, both clubs.
4. Outside circle behind hips, R. club.
5. Outside circle behind hips, L. club.
6. Outside circle behind hips, both clubs.

PART IV.—FRONT OF THIGHS.

1. Inside circle front of thighs, R. club. (See cut.)
2. Inside circle front of thighs, L. club.
3. Inside circle front of thighs, both clubs.
4. Outside circle front of thighs, R. club.
5. Outside circle front of thighs, L. club.
6. Outside circle front of thighs, both clubs.
7. Combine outside circle behind hips, R. club, and inside circle front of thighs, L. club.
8. Combine outside circle behind hips, L. club, and inside circle front of thighs, R. club.

NOTES ON INDIAN CLUBS.

SHORT CIRCLES—PART I.

POSITION.—(See cut.) Hold clubs perpendicular and close together at left side of waist. Make each circle four times before changing to the next circle.

1. Lower the clubs and swing out to the right side. Arms extended, and clubs pointing up and away from the body at an angle of 45 degrees. When carrying the clubs out to the right or left side, twist the body on the hips without moving the feet. Without moving the arms let the large ends of the clubs fall forward and up past the outside of the arms to starting position (see cut), describing short circles, of which the small ends of the clubs are the centre. Hold the handle of club firmly between the thumb and root of fore-finger—knob of handle in palm of hand. After making this circle four times then change to
2. Swing the clubs down in front of thighs and up to a left side horizontal, and make the same circles.
3. Swing back to right side horizontal position. Let the large ends of clubs fall forward and up between the arms.
7. Holding the clubs as in first exercise, let the large ends fall back towards the body, outside the arms, and up to starting position. This is the opposite circle to No. 1.
13. Let the right club swing down and up past the right side of right arm and left club down and up past the right side of left arm.
19. Let the clubs fall back—right club past right side of right arm, left club past left side of left arm—towards the body and up to position.
25. Arms and *clubs* extended at a right side *horizontal.* Turn the large ends of the clubs to the right, over the fore-arms to starting position—describing a horizontal circle. The ends of clubs going in the same direction as the hands of a watch.

PART II.

1. POSITION.—(See 1st cut Series 3.) Club in right hand, handle on point of right shoulder, large end of club pointing away from body at an angle of 45 degrees. Drop the large end of club down behind the back and continuing the circle up to starting position.

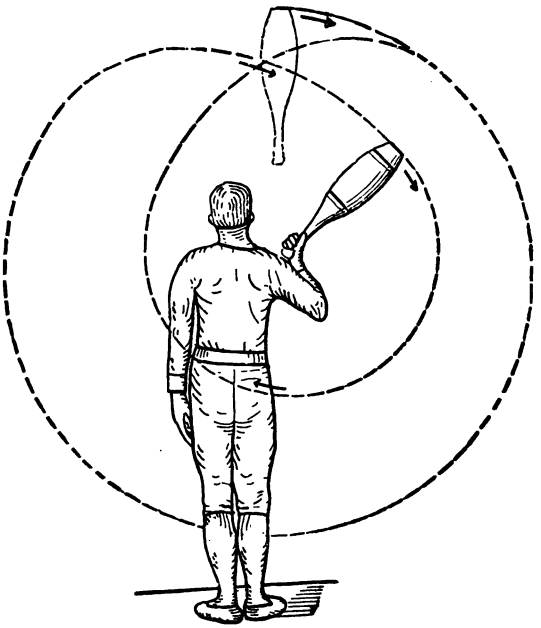
5. POSITION SAME AS ABOVE.—Swing the club down behind the head (see 2d cut Series 3) and up to starting position.
9. POSITION OF CLUBS SAME AS 1 AND 6.—Drop both clubs to the right—right club outside circle, left club inside circle.

PART III.

1. POSITION.—Club held beside the right leg. With a quick effort raise the club (see cut) by bending the elbow, swinging it a little away from the body and down behind the back.
4. POSITION.—Club held beside the right leg. Raise the large end of club up behind the hips and down, away from the right side of body to first position.

PART IV.

1. POSITION.—Club held beside the right leg. By a quick effort, without bending the elbow, raise the large end up and away from the thigh (see cut), and down in front of the thighs—elbow straight.
4. POSITION.—Club held beside the right leg. Raise the large end up in front of the thighs, and down to the right of the right thigh—elbow straight.



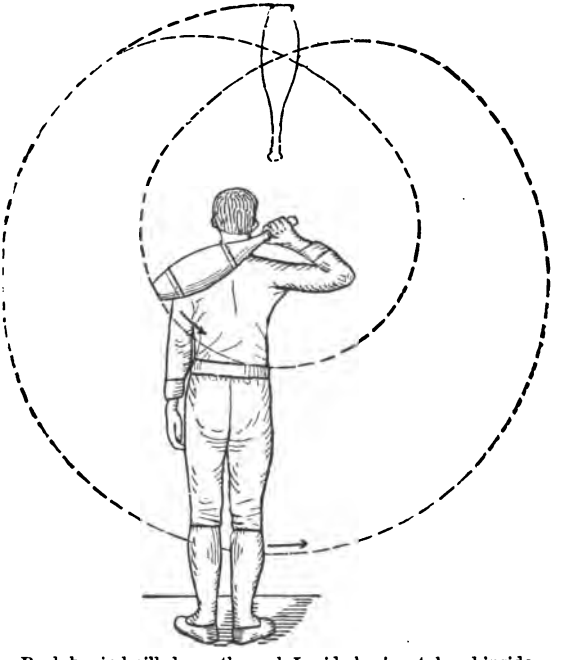
R. club windmill down through R. side horizontal and outside circle behind shoulder.

INDIAN CLUBS—Series No. 3.

COMBINATIONS BEHIND SHOULDERS.

1. (See cut.)—R. club windmill down through R. side horizontal and outside short circle, behind R. shoulder.
2. L. club windmill down through L. side horizontal and outside short circle, behind L. shoulder.
3. Alternate each club through same circles.
4. Combine both clubs through same circles.
5. (See cut.)—R. club windmill down through L. side horizontal and inside circle, behind R. shoulder.

6. L. club windmill down through R. side horizontal and inside circle, behind L. shoulder.
7. Alternate each club through same circles.
8. Combine both clubs through same circles.
9. Both club windmills down through R. side horizontal and short circles to the right, behind shoulders.
10. Both club windmills down through L. side horizontal and short circles to the left, behind shoulders.
11. Follow movement.



R. club windmill down through L. side horizontal and inside circle behind shoulder.

NOTES ON INDIAN CLUBS—SERIES No. 3.

3. Left arm and club at a left side horizontal, handle of right club at right shoulder—large end of club pointing diagonally away from shoulder, as in cut.

   Swing the right club in an outside short circle behind the right shoulder, and straighten the arm out to a right side horizontal. At the same time swing the left club down in front of the legs, making a full arm circle, and bring it to the left shoulder.

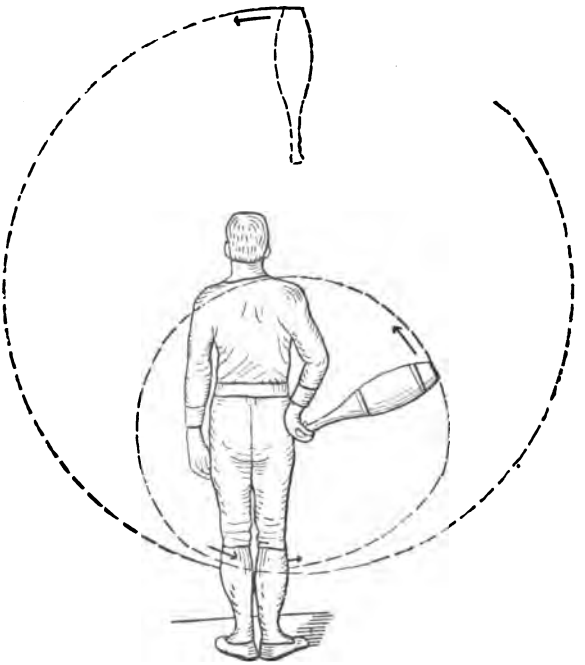
   Now make an outside circle behind the shoulder with the left club, and a full arm circle with the right club returning to the first position.

4. Both clubs over the head.

   Separate them out through side horizontals, swing up in front of the body (crossing them), separate and swing both clubs through outside circles behind the shoulders, and raise to the starting position.

7. Right club held horizontally over the head. Left fore-arm and club held horizontally in front of the chest. Swing the right club down behind the shoulder, up over the head, and stop with the right fore-arm in front of the chest. At the same time swing the left club down and up through a left side horizontal, and stop with the club held horizontally over the head.

   Now make an inside circle behind the shoulder with the left club and a full-arm circle down, and up through a right side horizontal with the right club, stopping at first position of this exercise.



R. club windmill down through L. side horizontal and inside circle behind hips.

INDIAN CLUBS—SERIES NO. 4.

COMBINATIONS BEHIND HIPS.

1. R. club windmill down through R. side horizontal and outside circle behind hips.
2. L. club windmill down through L. side horizontal and outside circle behind hips.
3. Alternate each club through same circles.
4. Combine both clubs through same circles.
5. (See cut.)—R. club windmill down through L. side horizontal, and inside circle behind hips.

6. L. club windmill down through R. side horizontal and inside circle behind hips.
7. Alternate each club through same circles.
8. Combine both clubs through same circles.

NOTES ON INDIAN CLUBS—SERIES No. 4.

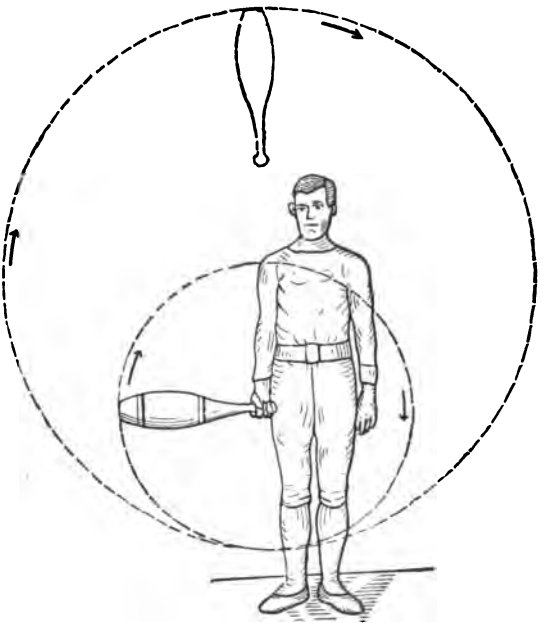
3. Left arm and club out at left side horizontal. Right club held at the side of right hip, elbow bent, and club pointing down and back.

   Lower the left club and swing in an outside circle behind the hips and stop with the club held by the side of the left hip, elbow bent, and club pointing down and back, at the same time raise the right club up in front of the body making a full-arm circle, and stop at a right side horizontal.

   Lower the right club into an outside circle behind the hips, and raise the left up through a full-arm circle, both clubs stopping in the first position of this exercise.

7. Right club held by the side of right thigh, left club and fore-arm held at a horizontal, in front of the chest. Raise the right club up through a right side horizontal, making a full-arm circle and stopping with the right fore-arm in front of the chest. At the same time bring the left club around the left side of the chest and swing in an inside circle behind the hips, stopping with the club held by the left thigh.

   Now raise the left club up through a left side horizontal making a full-arm circle, and make an inside circle behind the hips with the right club, stopping at the first position.



R. club windmill down through L. side horizontal and inside circle in front of thighs.

INDIAN CLUBS—Series No. 5.

FRONT OF THIGHS COMBINATIONS.

1. R. club windmill down through R. side horizontal and outside circle in front of thighs.
2. L. club windmill down through L. side horizontal and outside circle in front of thighs.
3. Alternate each club through same circles.
4. Combine both clubs through same circles.
5. (See cut.)—R. club windmill down through L. side horizontal and inside circle in front of thighs.

6. L. club windmill down through R. side horizontal and inside circle in front of thighs.
7. Alternate each club through same circles.
8. Combine both clubs through same circles.
9. Both club windmills down through R. side horizontal and circle to the right in front of thighs.
10. Both club windmills down through L. side horizontal and circle to the left in front of thighs.

VAULTING BAR—Series No. 1.

PART I.

1. Common Vault to right—to left.
2. Loin V. to right—to left.
3. Small of back V. to right—to left.
4. One hand small of back V. to R.—to left.
5. Distance V. to R.—to left.
6. Touch toe V. to R.—to left.

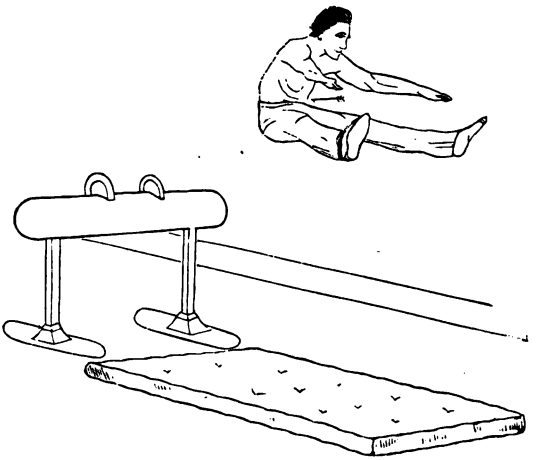
PART II.

1. Front V. to R.—to left.
2. R. hand front V. to R., left hand behind waist—to left.
3. R. hand front V. to R., left hand back of head—to left.
4. R. hand front V. to R., left hand high vertical—to left.
5. Twist V., R. hand high vertical—to left.
6. †Cut off R. hand to mat. hold !—to left.
7. Cut off R. hand V., snap—to left.

PART III.

1. Run under.
2. R. hand run under—left hand.
3. Snap under.
4. Snap under, and roll over.
5. Snap under, palms up.
6. Snap under, palms up, and roll over.
7. Snap under, palms up, and roll over and "L" scissors.

†See Definitions.



Scissors.

NOTES ON VAULTING BAR—SERIES No. 1.

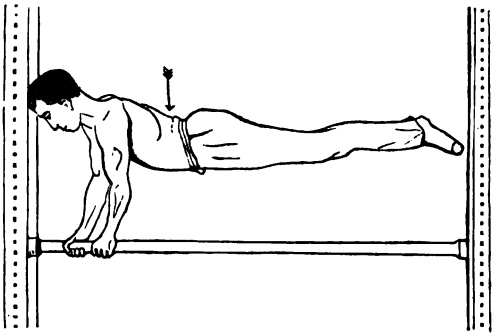
Height of bar three feet. Length of bar seven feet, oval shape, greatest width up and down. When vaulting to the right, stand at left end of bar. Vaulting to left, stand at right end of bar.

The most serviceable and convenient way of mounting and adjusting the bar is to place the ends in deep-grooved, vertical posts, or boxes, and held in place by iron pins through each post and ends of bar.

To prevent the hole from wearing and the bar from rattling, screw a plate of iron and piece of sole leather—the width of the bar—on each side of each end of bar.

The holes in the posts should be two inches apart.

1. (Vault to right.)—Both hands on top of bar. Vault over bar, carrying the feet to the right of the right hand, knees slightly bent. See "vault" in definitions.
2. (V. to R.)—Both hands on top of bar. When the body is going over the bar the legs should be extended horizontally—the body and legs parallel with the bar, right side of body up.



Small of back vault to left.

3. (See cut.)—(V. to R.)—Left hand under the bar, right hand on top, both close together. Vault over, carrying the legs and body horizontally when directly above the bar, the back should be up and front of body down.
4. (V. to R.)—Left hand under the bar. Try to carry the body at a horizontal when going over the bar—back up.
5. (V. to R.)—Same as No. 3.—When the body is going over the bar shove away, landing as far away from it as possible.
6. (V. to R.)—Left hand on bar, left side next to it, and right hand at the side. As the body is going over the bar reach forward and touch the toes with the right hand—legs straight. Immediately after touching the toes with the right hand grasp the bar with the same hand, letting go of the bar with the left hand.

PART II.

1. (V. to R.)—Both hands on top of bar, vault over, carrying the left foot between the hands and right foot to the right of the right hand.
2. (V. to R.)—Right hand on bar, left hand behind waist. Vault over, carrying the feet to the left and close to the right hand.
5. (V. to R.)—Left hand grasping under side of bar, right hand high over, the head. Vault over, turning the body to the left and landing about face, keeping the right hand at a high vertical.

6. (V. to R.)—Grasp bar with both hands. Vault to right, cutting off right hand and grasping bar again with the same hand as the feet strike the mat; with the head up and chest out hold this position a second.
7. (V. to R.)—Grasp bar with both hands. Vault to right, cutting off right hand; as the hand catches the bar again, shove off.

PART III.

1. With both hands on bar, stand three feet from it. Run under the bar, taking short steps, to the opposite side, raising up erect without a halt.
3. Spring from the feet, swinging them under the bar, and by a quick effort, with the assistance of the arms, shove away from it, to the opposite side.

VAULTING BAR—Series No. 2.

1. Vault between hands to mat—hold.
2. Vault between hands to mat—sit, snap.
3. Distance shoot.
4. Distance jump.
5. *Straddle V. on bar.
6. *Straddle V. over bar.
7. *Distance straddle V. over bar.
8. *Distance straddle V. over bar half turn to right.
9. *Distance straddle V. over bar half turn to left.
10. *Distance straddle V. to mat, sit, snap.
11. *Right hand S. V. on bar, left hand back of waist.
12. *Left hand S. V. on bar, right hand back of waist.
13. *Right hand S. V., on bar, left hand back of head.
14. *Left hand S. V., on bar, right hand back of head.
15. *Right hand S. V. over bar, left hand high vertical.
16. *Left hand S. V. over bar, right hand high vertical.

(Put up bar three holes.)

17. Run under, †* yawn stretch.
18. Run under, †*to lock, half turn to right.
19. Run under, †*to lock, half turn to left.
20. Snap under.
21. Snap under, half turn to right.
22. Snap under, half turn to left.
23. Snap under, †*roll over.
24. Snap under, †*frog jump.
25. Snap under, †*scissors.
26. Snap under, †*heel aerial.
27. Run serpentine, right and left.
28. Run snap, right and left.

* Stand by each member as he does the exercise.
† See definitons.

NOTES ON VAULTING BAR—SERIES NO. 2.

1. Hands about a foot apart on bar. Jump over the bar between hands, drawing the knees up close to the chin. Hold on to bar until the feet strike the mat.
2. Jump over the bar between the hands and sit on bar, then snap, or shove off.
3. Jump between the hands, and as the feet are above the bar, shoot them out in front as far as possible, at the same time pushing with the hands.
4. Jump between the hands, landing as far as possible on the other side of bar, carrying the body perpendicular.
5. Hands close together, jump, spreading the feet on the bar as far apart as possible. Careful.
6. Straddle over, landing with feet together.
8. Don't try to make the half turn until the body is above the bar.
10. Straddle vault over to mat, then separating the hands on bar sit between them and snap, or shove off.
17. See 1st series.
18. Hands on bar about a foot apart. Run under to other side of bar as far as possible (elbows straight, knees stiff and stomach up), then let go with the left hand and turn the body over to face down and catch bar with the left hand.
20. See 1st series.
21. Do not try to make the turn until the body is beyond the bar.
23. When landing from the snap add the roll-over.
27. Same exercise as No. 17 doubled up. Run under the right end of bar, turn to the left and run under the left end. This should be done fast.

VAULTING BAR—SERIES No. 3.

1. Vault to right and repeat—to left.
2. One hand V. to right and repeat—to left.
3. Touch toe V. to right and repeat—to left.
4. V. to right and repeat, right hand V. to right and repeat—left.
5. V. to right and repeat, touch toe V. to right and repeat—left.
6. One hand V. to right and repeat, touch toe V. to right and repeat—left.
7. *Back of waist V. to right and repeat—left.
8. *Back of head V. to right and repeat—left.
9. *Twist V. to right and repeat—left.
10. *Twist V. to right, V. back between hand and post —left.
11. *Twist V. to right, straddle V. on bar—left.
12. *Twist V. to right, straddle V. over bar—left.
13. Right leg V., hands back of head—left.
14. Right leg V., hands at a vertical—left.
15. Front circle, knuckles out, pass through †lock.
16. Front circle, knuckles in, pass throngh †lock and roll over.

*Stand by each man as he does the exercise.
†See definitions.

NOTES ON VAULTING BAR—SERIES No. 3.

All the exercises of this series are taken from the first and second series, except the last four.

1. Left hand under bar, right hand on top, and close together. Vault over bar and back again without changing hands.
3. Vault over with one hand and back again with the other.
4. This is a combination of the third and fourth exercises of 1st series.
5. Combination of third and fifth exercises.
6. Combination of fourth and fifth exercises.
7. One hand back of waist.
8. One hand back of head.
9. Twist vault over bar (1st series); make a square vault back again next to the thumb side of the hand.
10. Twist vault over bar; make a square vault back again next to little finger side of the hand.
11. Twist vault over bar; straddle vault back on bar, and to mat.
13. Standing square facing the middle of the bar with the fingers interlaced back of the head, arms sides horizontals. Now throw the right leg over the bar, the thigh resting on the bar at the knee joint; give a spring, throwing the left leg over the bar, and landing on left foot.
15. Grasp the bar, hands on top and about a foot apart. Raise the body up so that the front thighs will rest against the bar. Lean the body forward, turning under the bar, keeping the elbows and body straight as possible. As soon as the feet strike the mat raise the body up until the elbows come to a "lock" and push away from bar, raising on feet with hands at yawn stretch.
16. Hold the bar with the hands under it, palms up.

PARALLEL BARS—SERIES No. 1.

1. Front vault to right—to left.
2. Front vault to right, inside twist—to left.
3. Front vault to right, outside twist—to left.
4. Sit V. from L. bar over R. bar—to left.
5. Sit V. position on L. bar, add No. 1 back V. over R. bar—to left.
6. Frog V. to R.
7. Frog V. position—add No. 1 back V. to R.—to left.
8. *Cut frog V.—add No. 1 V. to R.—to left.
9. *Cut frog position—add back V. to right—to left.
10. *Cut frog position—add No. 2 back V. to right—to left.
11. *Cut frog position–add No. 3 back V. to right–to left.

*Stand by each man as he does the exercise.

NOTES ON PARALLEL BARS—SERIES No. 1.

For beginners the high beat board should be used. For advanced pupils use low beat board or mat to spring from.

Double class work can be done, if the bars are ten feet long; a man working on each end of the bars.

When landing from a vault, bend the knees a little and always catch the bar with the hand that is next to it.

Grasp the bars close to their ends when taking position for vault.

POSITION.—Stand facing the ends of the bars. Grasp them firmly—elbows straight. Pull strong with the arms as the spring is made with the legs.

1. Vault over right bar to mat, landing on the outside and towards the middle of the bar, keep the knees stiff, toes pointed and chest out while going over. Same over left bar.
2. Vault and when the body is over the right bar, twist it to the left, or inside, at the same time letting go with the right hand and grabbing the bar again before the feet strike the mat, with the right hand. Land about face. Over left bar, opposite turn.

3. Vault over right bar turning the body to the right, or outside, holding on the bar with right hand and landing about face. Opposite turn over left bar.
4. Vault on right bar to sitting position, snap the feet up, and vault over left bar. Vault on left bar, etc.
5. Vault on right bar to sitting position; change the hands to front of thighs, lift the thighs and throw the body over the left bar. On left bar, etc.
6. Raise the legs a little above and spread them on the bars. Snap the legs up and carry them and the body over right bar. Over left bar, etc.
7. Vault separating the legs on the bars. Change the hands, grasping the bars in front of thighs, lift the thighs and throw the body over right bar. Same over left bar.
8. (Careful.) Jump over ends of bars to sitting position; grasp the bars behind the hips and snap off as in No. 6.
9. Cut frog and back vault over right bar. Same over left.
10. Cut frog and back vault over right bar, twisting the body to the right, cutting off the right hand, and before landing catching the bar with the right hand. Land about face. Opposite turn over left bar.
11. Cut frog and back vault over right bar; turning the body to the left, landing about face. Do not let go with the right hand. Opposite turn over left bar.

After the class becomes familiar with the above manner of making the vaults new interest will be added by the following preliminaries to the vaults:

FIRST.—Make a short run toward the ends of the bars; spring from both feet near the posts landing with hands on the bars and vault over. Extend the arms well in front of the body just before making the spring. Do not let the hands touch the bars until after the spring is made from the feet.

SECOND.—Stand in the middle of and between the bars, hands by the side of thighs. Spring from the floor high enough to allow the hands to grasp the bars without bending the elbows, with the same movement carry the legs over the bar, adding the different vaults.

PARALLEL BARS—Series No. 2.

BACK VAULTS.

1. Back vault to R.—to left.
2. Back vault to R., outside twist—to left.
3. Back vault to R., inside twist—to left.
4. Back sit V. to R.—to left.
5. Back sit V. position, front sit V. to R.—to left.
6. Back frog V. to R.
7. Back frog V. position, front frog V. to R.—to left.
8. Back frog V. position, inside twist, V. to R.—to left.
9. Back frog V. position, outside twist, V. to R.—to left.

NOTES ON PARALLEL BARS—Series No. 2.

Position.—Stand facing ends of bars, grasping left bar with right hand. Spring up between the bars, turning the body to the left, and catch the other bar with left hand. Swing the legs up in front of the body and vault back in the direction and manner named.

1. Swing the legs back over the right bar. Knees straight and legs together as they go over the bar. Catch the bar with the left hand as the feet strike the mat.
2. Turn the body to the left over right bar.
3. Turn the body to the right over right bar.
4. Sit on left bar, vault over right.
5. Sit on left bar, change hands to behind hips and front vault over right bar.

After the class becomes familiar with the above manner of doing the vaults, then try them by springing back over bar from beat board without raising the feet up in front of the body.

PARALLEL BARS—Series No. 3.

OBLIQUE SNAPS.

1. Position, snap under R. bar—to left.
2. Position, jump, snap under R. bar—to left.
3. Two-steps each hand, S. U. R. bar—to left.
4. Strike chest walk, S. U. R. bar—to left.
5. Sit vault position, S. U. R. bar—to left.
6. Frog vault position, S. U. R. bar—to left.
7. *Cut frog, S. U. R. bar—to left.
8. Sink to grasshopper, S. U. R. bar—to left.
9. Sink to grasshopper, push up, S. U. R. bar—to left.
10. Grasshopper walk, S. U. R. bar—to left.
11. Grasshopper walk, strike chest, S. U. R. bar—to left.
12. Grasshopper jump, S. U. R. bar—to left.
13. Front thighs on R. B. to mat, S. U. R. bar—to left.
14. Front thighs on L. B. snap under bars. Don't let feet touch mat.
15. *Front thighs on R. B. snap under bars.

*Stand by to assist each fellow.

NOTES ON PARALLEL BARS—SERIES No. 3.

POSITION for each exercise.—(See cut.)—Grasp the ends of bars and raise the body up between them until the elbows are straight. Head up, chest out, legs back and together, and toes pointed to floor.

1. Raising the feet up under right bar, snap under it in a forward oblique direction, at the same time catch the right bar with both hands.
2. Give a short jump with both hands and snap under.
3. Two short steps with left hand, then two with right hand and snap.
4. Bearing the weight of the body on one hand, strike the chest with the opposite hand, making two steps, snap under bar.
5. (See fifth exercise of first series)—Sit vault on left bar, snap under right.
6. See seventh exercise, first series.
8. From Position lower the body between the bars as much as possible and snap under bar. (The arms and fore-arms somewhat like a grasshopper's legs.)
10. Sink to grasshopper and take one step with each hand and snap.
11. Sink to grasshopper, bear the weight of the body on one hand and strike the chest with the other, make a step with each hand, and snap under bar.
12. Make two or three jumps with hands and snap.
13. Swing the legs over right bar letting the thighs rest on it. Change the hands and grasp the opposite bar. In this position the front thighs will be on one bar and the hands on the opposite bar; now let the body drop to mat (the hands catching the bar next to body), and snap under both bars.
14. Same as above, but don't let the feet touch the first mat.

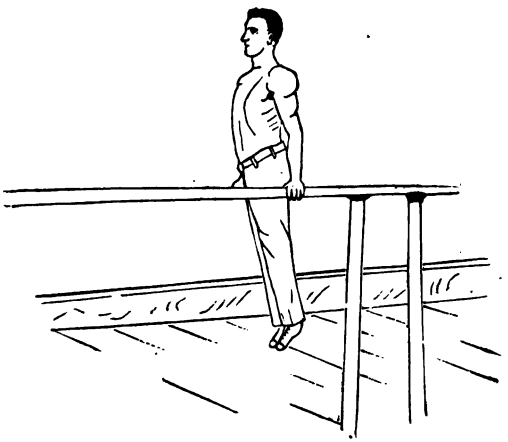
PARALLEL BARS—SERIES No. 4.

1. Vault to right. 2. To left.
3. Front walk.
4. V. to R. and inside twist. 5. To left.
6. Two step front walk.
7. V. to R. and outside twist. 8. To left.
9. Strike chest walk.
10. Sit V. on R. bar. 11. On left.
12. Stiff arm jump.
13. Sit V. position, back V. to R. 14. On left.
15. Front swing jump.
16. Frog V. to R. 17. To left.
18. Front thighs on R. B. to mat. 19. On left.
20. Frog V., position, back V. to R. 21. To left.
22. Front thighs on R. B. to mat, snap U. R. B. 23. On left.
24. *Cut frog V. to R. and inside twist. *25. To left.
26. Front thighs on R. B. snap under bars. 27. On left.
28. *Cut frog V. to R. and outside twist. *29. To left.
30. Stiff arm jump to middle of bars, drop between bars, turning quarter way to R., holding hands at yawn stretch, wipe-off-chin walk.

*Assist.

NOTES ON PARALLEL BARS—SERIES NO. 4.

Commencing with No. 1, each alternate exercise is taken from the first series.



Position.

POSITION.—(See cut.)—Grasp ends of bars, and spring up to straight arms, body hanging between the bars. Head up, front chest out, stomach in, legs together and toes pointed down. Take this position before performing the following exercises:

3. Take a short step with the right hand—elbows straight—and one with the left, continuing the walk to the end of the bars.
6. Take two steps with right hand then two with left, continuing the walk to the end of the bars.
9. Bearing the weight of the body on the left arm, at the same time strike the chest quickly with the right hand and return it on right bar. Lean the body on the right arm and strike the chest with left hand.
12. Make short jumps, with both hands at the same time, along the bars.
15. With the elbows straight, swing the legs up in front of the body. Let them swing down and up back of the arms. As the legs are swinging down past the arms again, push the

body forward, sliding the hands a few inches along the bars. Repeat to the ends of the bars.

18. Raise the legs over right bar, thighs resting on bar. Grasp left bar with both hands opposite the thighs, front thighs resting against bar. Push the thighs away from the bar and drop to the mat, grasping the bar next to the body.

22. First part of this exercise is same as No. 12. When the feet strike the mat, snap under both bars to opposite side.

26. Raise both legs over right bar, thighs resting against bar. Grasp left bar with both hands just opposite thighs. Lower the body, catch the bar next to the body and snap under both bars to the opposite side.

30. When dropping to the floor between the bars, raise the arms to a high vertical; with stomach forward, bend the back and walk under the bar without bending the elbows or letting the knees touch the floor.

HORSE—Series No. 1.

1. Vault to right—to left.
2. Loin V. to R.—to left.
3. Small of back V. to R.—to left.
4. Distance V. to R.—to left.
5. Fly V. to R.—to left.
6. V. over seat.
7. V. over seat, hold.
8. Distance shoot.
9. Distance jump.
10. V. to knees, jump.
11. V. to knees, jump, half turn to right.
12. V. to knees, jump, half turn to left.
13. V. to knees, squat feet, slide.
14. V. to knees, to feet jump.
15. Hand hurdle, squat feet, slide.
16. Hand hurdle over seat.
17. Hand hurdle over seat, half turn to right.
18. Hand hurdle over seat, half turn to left.
19. Hand hurdle over seat, run off.
20. Clear hurdle on seat.
21. Clear hurdle over seat.
22. Clear hurdle over seat, hands at side horizontals.
23. Clear hurdle over seat, hands at front horizontals.

NOTES ON HORSE—Series No. 1.

Position—In front of horse with a hand on each pommel—except the last four exercises.

1. Jump, carrying the body over the right side of horse. Before landing on mat, let the hands drop by sides. Over left side.
2. Carry the body over the right side of horse at a horizontal, knees and hips straight. Right side up. Action on the right loin. Over the left side.
3. Same as above with the back up. Action strong in back.
4. The same exercise as No. 3 exaggerated.
5. The left leg between pommels and the right one held out to right side of body, knee straight.
6. Carry both feet between the pommels.
7. When the feet strike the mat hold a second, with the chest out (sternum expression).
8. Carry the feet between the pommels and shoot them out from the horse, at the same time push away with the hands. Land as far away from the horse as possible.
9. Carry the feet between the pommels and push away from the horse, landing in an erect position.
10. Spring, and place the shins on seat; let go of pommels and spring off from shins.
13. Spring from shins on feet to a squatting position, let go of pommels and slide off.
14. Spring from shins to a standing position on seat, jump off.

MAKE A RUN FOR THE REMAINING EXERCISES.

15. Catch the pommels, carry the feet up on seat, let go of pommels and slide off while squatting.
16. In this exercise when the feet are passing between the pommels shoot them out, landing away from horse.
19. Run over horse, springing from right foot and landing on left on the other side of horse, and vice versa.

Do not use the hands in the four remaining exercises.

HORSE—Series No. 2.

1. Hand hurdle to squat feet, slide.
2. Hand hurdle over seat.
3. Hand hurdle over seat, half turn to right.
4. Hand hurdle over seat, half turn to left.
5. Hand hurdle over seat, full turn to right.
6. Hand hurdle over seat, full turn to left.
7. Clear hurdle, squat feet, slide.
8. Clear hurdle, standing position.
9. Clear hurdle to seat, run off.
10. Clear hurdle to seat, jump, half turn to right.
11. Clear hurdle to seat, jump, half turn to left.
12. Clear hurdle to seat, jump, *Scissors.
13. Clear hurdle to seat, jump, *Heel Aerial.
14. Clear hurdle to seat, jump, *Pull String.
15. Clear hurdle to seat, jump, *Yawn Stretch.
16. Clear hurdle over seat, land on two feet.
17. Clear hurdle over seat, half turn to right.
18. Clear hurdle over seat, half turn to left.
19. Clear hurdle over seat, run off.
20. Clear hurdle over seat, run off, hands back of head.

*See definitions.

NOTES ON HORSE—Series No. 2.

Practice all exercises leaping from each foot.

For description of each exercise see first series.

9. Leap from right foot, on horse with left, and on mat with right. Keep up the run, leaning the body well forward.

HORSE—Series No. 3.

1. Run jump on seat.
2. Run jump on pommels.
3. Run jump outside pommels.
4. Run jump on seat, jump outside pommels.
5. Run jump outside pommels, jump on seat.
6. Run jump on seat, jump off, ¼ turn to R. 7. To left.
8. Run jump on seat, landing ¼ turn to R. 9. To left.
10. Run jump on seat, landing ¼ turn to R., slide to straddle. 11. To left.
12. Run jump over seat.
13. Run jump over seat, ¼ turn to R. 14. To left.
15. Run jump over seat, ½ turn to R. 16. To left.
17. Jump and jump on seat.
18. Jump and jump on pommels.
19. Jump and jump on outside pommels.
20. Jump and jump over seat.
21. Jump and jump over seat, ¼ turn to R. 22. To left.
23. Jump and jump over seat, ½ turn to R. 24. To left.
25. Stand jump on seat.
26. Stand jump on pommels.
27. Stand jump outside pommels.
28. Stand jump over seat.
29. Stand jump over seat, ¼ turn to R. 30. To left.
31. Stand jump over seat, ½ turn to R. 32. To left.
33. Two men front, roll over.
34. Two men clear hurdle on horse.
35. Two men clear hurdle over horse.

NOTES ON HORSE—SERIES No 3.

Members who have very weak abdominal muscles should not practice this series until they have strengthened these parts by special work. Allow no one to practice this until he can raise up on the abdominal mat with the hands back of the head.

Raise the shoulders, hold the head up and close the hands tightly, as you are making the jumps.

Do not touch handles in any of the exercises of this series.

A jump is a spring from both feet.

1. Spring from both feet.
6. Land on floor a quarter turn to right.
10. Land on seat, body facing end of horse, separate the feet a little, letting legs slide down each side of horse until you come to a sitting posture. Hands by side of thighs. Grasp pommel in front of body and raise off.
17. Make one jump on mat before jumping on horse.

BUCK—SERIES No. 1.

1. Straddle vault.
2. Straddle vault from thighs.
3. Long jump straddle vault.
4. Right oblique straddle vault—left oblique.
5. Right oblique straddle vault, right hand—left hand.
6. Right hand V., left hand at side—left hand.
7. Right hand V., left hand at back of head—left hand.
8. Right hand V., left hand at side horizontal—left hand.
9. Right hand V., left hand at front horizontal—left hand.
10. Right hand V., left hand at back of head—left hand.
11. Right hand V., left hand at high vertical—left hand.
12. Run, leap, straddle V., no hands, right foot—left foot.
13. Run, jump, straddle V., no hands.
14. Run, jump, straddle V., with hands, half turn to right —to left.
15. Run, jump, straddle V., no hands, half turn to right —to left.
16. Run, jump, straddle V., roll over, with hands.
17. Run, jump, straddle V., no hands, roll over.

NOTES ON BUCK—SERIES No. 1.

Walk up to the buck in doing the first eleven exercises. Make a short run when doing the last six.

N. B.—All the exercises done with one side of body, or one hand, should also be done with the other.

1. Placing the hands on seat of buck, spring, spreading the legs and straddle over bringing the feet together when landing on other side.
2. Place the hands on seat, lift the body up resting the front of thighs against the buck, and straddle over.
3. Same as No. 1, only make as long a distance as possible from the place of springing on one side, to the place of landing on the other side of buck.
4. Straddle over buck from one corner to the oblique corner.
5. Same as above, using only one hand.
6. Front straddle vault right hand on seat, left hand at side.
12. Leap from right foot and straddle vault over.
13. Spring from both feet.
14. Don't try to make the half turn until the body is well over the buck.

BUCK—Series No. 2.

1. Vault to knees, spring off.
2. Vault to knees, spring, and half turn to right.
3. Vault to knees, spring, and half turn to left.
4. Vault to knees, to feet, jump.
5. Vault to feet, jump.
6. Jump to knees, spring off.
7. Jump to feet, jump,
8. Jump over seat.
9. Run, leap on seat, jump off.
10. Run, leap over seat.
11. Run, jump over seat.
12. Run, jump over seat, half turn to right.
13. Run, jump over seat, half turn to left.
14. Run, jump on seat, half turn to right.
15. Run, jump on seat, half turn to left.
16. Run, jump on seat, *add Scissors.
17. Run, jump on seat, *"L" Scissors.
18. Run, jump on seat, *Heel Aerial.
19. Run, jump on seat, *Pull String.
20. Run, jump on seat, *Yawn Stretch.
21. Clear hurdle on seat, run off.
22. Clear hurdle over seat.
23. Clear hurdle over seat, hands at side horizontals.
24. Clear hurdle over seat, hands at front horizontals.
25. Clear hurdle over seat, hands at high vertical.
26. Clear hurdle over seat, hands at back of head.
27. Clear hurdle over seat, hands behind back.
28. Clear hurdle over seat, hands on hips.
29. Clear hurdle over seat, hands folded in front.
30. Clear hurdle, *Roll Over.

*See definitions.

NOTES ON BUCK—SERIES No. 2.

1. Place the hands on the seat, jump, placing the shins between them, take away the hands and spring over buck.
2. Land on mat facing the buck.
4. When resting on the shins, spring to feet on the seat, and jump off.
6. Without hands.
9. Springing off one foot, land on two feet on the buck, and jump off.
11. Springing from both feet.
21. Leap off of one foot, land the other on the buck, and the opposite foot on mat on the other side.

BUCK—Series No. 3.

1. Run, jump on buck.
2. Run, jump on buck, quarter turn to right.
3. Run, jump on buck, quarter turn to right, slide horse-back ride.
4. Run, jump on buck, half turn to right.
5. Run, jump on buck, quarter turn to left.
6. Run, jump on buck, quarter turn to left, slide horse-back ride.
7. Run, jump on buck, half turn to left.
8. Run, jump over buck.
9. Run, distance jump over buck.
10. Run, distance jump over buck, add Roll Over.
11. Run, jump over buck, quarter turn to right, (land *Pull String.)
12. Run, jump over buck, half turn to right.
13. Run, jump over buck, quarter turn to left, (land *Pull String.)
14. Run, jump over buck, half turn to left.
15. Run, jump over buck, add Back Roll Over.
16. Run, jump over buck, add "L" Scissors.
17. Run, jump over buck, add Scissors.
18. Run, jump over buck, add Heel Aerial.
19. Run, jump over buck, add Hands back of neck.
20. Run, jump over buck, add Yawn Stretch.
21. Belly roll over.
22. Belly roll over and mat roll over.
23. Funny post roll over.
24. Clap hands, funny post roll over.
25. Strike chest, funny post roll over.
26. Strike front of thighs, funny post roll over.
27. Strike back of thighs, funny post roll over.
28. Strike back of head, funny post roll over.

29. Small of back roll over—(Omit if abdomen is weak).
30. Small of back roll over, add straddle V. to starting position.

*See definitions.

NOTES ON BUCK—SERIES No. 3.

2. Land on buck, quarter turn to right.
3. Spread the feet enough to let the legs slide down the buck to sitting position. Place hands on end of buck and pull off.
16. After landing on the other side of buck, jump again adding "L" Scissors.
21. Belly on buck—hands on mat. Roll over on mat.
23.—POSITION—Hands on mat, feet on buck, body suspended. Raise the feet off the buck and front roll over.
24. Same position. Clap the hands together under the body before making the roll.
29. Small of back on buck, hands reaching down on mat. Raise the feet up and over on mat, keeping elbows stiff.

BUCK—Series No. 4.

PART I.

1. Cut off right hand and back to starting place.
2. Cut off left hand and back to starting place.
3. Cut off right hand, cut off left hand.
4. Cut off left hand, cut off right hand.
5. To thighs, to mat, distance jump between hands.
6. Vault between hands to mat. Hold!
7. Straddle twist to right, straddle back.
8. Straddle twist to left, straddle back.

PART II.

1. Hurdle run, right foot on buck. Hold!
2. Hurdle run, left foot on buck. Hold!
3. Hurdle run, between hands.
4. Hurdle run, between hands, half turn to right.
5. Hurdle run, between hands, half turn to left.
6. Clear hurdle run.
7. Clear hurdle run, half turn to right.
8. Clear hurdle run, half turn to left.
9. Don't "wet your feet," to right.
10. Don't "wet your feet," to left.

PART III.

1. Twist, back straddle V. to right.
2. Twist, back straddle V. to left.
3. R. hand, twist back straddle V. to right.
4. L. hand, twist back straddle V. to left.
5. Twist, back straddle V. to R., straddle over to starting place.
6. Twist, back straddle V. to L., S. V. to starting place.
7. R. hand twist, back S. V. to R., R. hand S. V., to starting place.

8. L. hand twist, back S. V. to L., L. hand S. V., to starting place.

PART IV.

1. Twist scissors to right on length of buck.
2. Twist scissors to left on length of buck.
3. Twist scissors to right on length of buck, snap off.
4. Twist scissors to left on length of buck, snap off.
5. Straddle walk on hands.
6. Straddle walk on hands, repeat back
7. Straddle jumps on hands.
8. Run distance, leap on buck. Hold!

NOTES ON BUCK—SERIES No. 4.

PART I.

1. Carry the legs around right end of buck—cutting off right hand—and stopping on opposite side. Swing the legs around right end of buck again, to starting position—cutting off right hand.
3. Carrying the legs around right end of buck—cutting off right hand—and continuing around the left end to starting position—cutting off left hand.
5. Raise the body on stiff arms, thighs resting against buck. Lower feet to the mat and jump over buck between hands.
7. Straddle over buck, landing about face on opposite side.

PART II.

1. Spring from right foot, land left foot on buck and land on right foot on opposite side.
6. Spring from one foot, landing on the other foot on opposite side.
7. Leap over, landing about face.
9. Place both hands on buck. Jump, carrying the thighs to right end of buck, left thigh resting against it; twist the body to the left until front of thighs rest against opposite side of buck from which the start was made: straddle vault over buck.

PART III.

1. Facing buck, place both hands on it. Jump, turning the body to the right, straddling over backwards.

PART IV.

1. Place hands on right end of buck. Vault, throwing left leg over buck, and straddling on to face, right end of it, hands in front of thighs; swing the legs as high as possible above the buck; while they are above the seat twist the body and legs quickly to the right, so that in landing on the seat the right leg will be on the same side of seat as the left hand, left leg on opposite side. Bring hands around in front of thighs, and back vault off.
3. After twist scissors, with the hands behind hips, throw the legs off in front of end of buck, pushing off with hands.
5. Stand facing end of buck. Hands on it. Jump up, balancing the body on the arms; hold the legs well in front and walk across the length of seat on the hands.
7. Position same as above. Jump along the length of seat on hands.

HIGH BARS—Series No. 1.

1. Front walk, hands outside of bars.
2. Back walk, hands outside of bars.
3. Front jumps, hands outside of bars.
4. Back jumps, hands outside of bars.
5. Front walk, hands inside of bars.
6. Back walk, hands inside of bars.
7. Front jumps, hands inside of bars.
8. Back jumps, hands inside of bars.
9. Swing jump, jump hands outside of bars.
10. Swing jump, jump hands inside of bars.
11. Swing jump, jump change inside to outside.
12. Swing jump, jump change outside to inside.
13. Front walk, half-arm, head above bars.
14. Back walk, half-arm, graduate to Yawn Stretch.
15. Fill lungs, long stride, hands outside.
16. Fill lungs, long stride, hands inside.

NOTES ON HIGH BARS—Series No. 1.

The bars should be at least 9 feet long and about 7½ feet high. Keep chest out, knees stiff and together, and toes pointed to mat. Take short steps.

9. Spring from the beat or spring board, catching bars on outside and before the body starts to swing back, make another jump with hands, letting go of the bars the instant the body is directly under the hands and drop, with head back and chest out.

This series of the high bars stretch out and make more elastic all those muscles that the trick rings, horse, horizontal bars, etc., tend to stiffen and contract. The first eight exercises should be used to finish up an hour's work in the gymnasium.

HIGH BARS—SERIES No. 2.

1. Front walk, hands outside of bars.
2. Back walk, hands outside of bars.
3. Front walk, two steps each hand.
4. Back walk, two steps each hand.
5. Half-arm front walk, head above bars.
6. Half-arm back walk, head above bars.
7. Front jumps.
8. Back jumps.
9. Half-arm front jumps.
10. Half-arm back jumps.
11. Front walk, *hands inside of bars.*
12. Back walk, *hands inside of bars.*
13. Front walk, two steps each hand.
14. Back walk, two steps each hand.
15. Front walk, legs at "L."
16. Back walk, legs at "L."
17. Front jumps.
18. Back jumps.
19. Front graded jump to half-arm.
20. Back graded jump from half-arm to yawn stretch.

NOTES ON HIGH BARS—SERIES No. 2.

Keep chest out, knees stiff and together, and toes pointed to mat.

3. Make two steps with each hand before moving the other one.
19. From a yawn stretch position, make graded jumps to half-arm position to opposite end of bars.

HIGH BARS—Series No. 3.

SINGLE BAR.

1. Side Walk, palms in, to right.
2. Side Walk, palms out, to left.
3. Side Walk, palms in, to right two steps.
4. Side Walk, palms out, to left two steps.
5. Lap-Hand Walk, palms in, to right.
6. Lap-Hand Walk, palms out, to left.
7. Side Jumps, palms in, to right.
8. Side Jumps, palms out, to left.
9. Half-Arm Side Walk, palms in, to right.
10. Half-Arm Side Walk, palms out, to left.
11. Half-Arm Side Walk, palms in, to right, legs at "L."
12. Half-Arm Side Walk, palms out, to left, legs at "L."
13. Half-Arm Side Walk, palms in, to right, Lap-Hand.
14. Half-Arm Side Walk, palms out, to left, Lap-Hand.
15. Half-Arm Side Walk, palms out, to right, Lap-Hand and legs at "L."
16. Half-Arm Side Walk, palms out, to left, Lap-Hand and legs at "L."
17. Jar Jumps, palms in, to right.
18. Jar Jumps, palms out, to left.
19. Side Walk, palms in, to right, knees to Sternum.
20. Side Walk, palms out, to left, knees to Sternum.
21. Yard Measure, palms in, to right.
22. Yard Measure, palms out, to left.

NOTES ON HIGH BARS—SERIES No. 3.

In all exercises start at the same end of bars.

POSITION.—Head up, front chest up, legs together, and toes pointing to floor.

1. Catch left end of bar, hands together and on opposite side of bar from the body—palms facing body. Let go of bar with right hand, grasping it again as far as can be conveniently reached from the left hand; bring the left hand up to the right and continue the strides to the end of the bar.
2. Start at same end of bar but on the opposite side, hands on the same side of bar as the body—palms facing away from body.
3. Lead with right hand, catching the bar about a foot from the left, let go of bar again with the same hand, catching the bar as far as can be conveniently reached from the left. Bring the left hand up to the right and continue the double step with the right hand.
5. Hands separated on the bars 18 inches. Let go of bar with left hand, catching it again to the right of the right hand. Let go with right hand and catch the bar beyond the left. Repeat to the end of the bar.
7. Hands together, without raising the body any more than necessary make short jumps along the bar.
9. Raise the body until the chin is above the bar and walk to right.
11. Same as above and holding the legs straight in front of and at right angles with the body.
17. With hands together make short jumps along the bar.
19. Holding knees up in front of the chest.
21. Take *very* long strides.

Action on biceps, forearms, pectorals, abdominals and small muscles connected with inspiration.

CHEST BARS.—Series No. 1

PART I.

1. Push in strong to face of shoulders.
2. Same exercise, put the power on second count.
3. Same exercise, put the power on both counts.
4. Same exercise, put the power on second count.

PART II.

1. Swing in, change hands to level of hips, palms front.
2. Swing in, change hands to high over head.
3. Alternate.

PART III.

1. Swing in, change hands to a high vertical.
2. Pull forward, raise up, swing hands to a vertical.
3. Alternate 1 and 2.
4. No. 2 and front hammer.
5. Wrestling exercise.

NOTES ON CHEST BARS.—SERIES No. 1.

1. POSITION.—Stand erect, hands grasping bars level with the shoulders, heels against heel cleats. Swing the body in between the bars, raising on the toes. Try to touch the elbows behind the back. Back again to position.
2. Push in between the bars easy. Pull out strong.

PART II.

POSITION.—(Same as No. 1, Part 1.) As the body swings in between the bars, lower the hands to a level with the hips, letting them slide around inside the bars. As the body swings out, raise the hands to the starting position.

2. As the body swings in raise the hands along the bar as high as possible.

PART III.

1. (Position is the same as Part 1.) Swing the body in between the bars raising the hands along the bars above the head.
2. POSITION.—Hands grasping the bars two feet from the floor, the body lowered close to the floor, knees and elbows straight. Raise up to an erect position, slide the hands up the bars above the head and swing the body in between them.
4. As the body is swinging in between the bars carry one foot between them, planting it beyond the bars.
5. POSITION.—Hands grasping bars level with the shoulders, stand erect. Throw the body strong to the right and left side and between the bars. Lower the right hand as the body swings to the right, lower the left hand as the body swings to the left.

PART I.

1. Acts on muscles of front shoulders and front chest, middle and back lower chest, forearms and back shoulders as well as strengthening the hand grip. Ex. 2 is the most important and should be practiced a third more imes than Ex. 1.

PART II.

Ex. 1 acts on front chest, face of forearms, front upper arms and face of shoulders.

Ex. 2 back arms, back chest and back thighs as well as those named in Ex. 1.

PART III.

Ex. 2 acts on the same muscles as No. 2 of Part II. with this addition—when the hands are raised to a vertical, the upper chest gets extra work and side walls of chest are expanded as the body swings in between the bars. No. 5 develops the hand and thigh muscles.

CHEST BARS.—SERIES No. 2.

1. Abdominal exercise, hands against wall.
2. Right loin exercise.
3. Left loin exercise.
4. Whole back exercise.
5. Scoop.
6. Whole back exercise and scoop.
7. Small of back exercise. Use bell to brick.
8. Small of back exercise. Out-reach on floor.
9. Alternate 7 and 8.
10. Slow scoop, hands high vertical, exhale going down, inhale coming up.

NOTES ON CHEST BARS.—SERIES No. 2.

1. POSITION—Back against waist strap, face the wall, toes against heel-and-toe cleat. Use from 6 to 10 lb. dumb-bell in hands. With the hands high over the head, lean the body forward until the hands touch the wall (if the bars are not over three feet from the wall), lean back again on strap and carry the hands about a foot beyond a vertical. Repeat; keeping the lungs partly inflated. Keep knees straight and both heels on floor.
2. POSITION—Right hip against strap, hands high over the head, feet together, left foot against cleat. Rock the body to the right and left slowly, keeping arms against ears.
3. POSITION—Left hip against strap.
4. POSITION.—Upper front thighs against strap, hands at a high vertical. Lean the body forward, lowering the hands to the floor and reaching out as far as possible, keeping the heels on the floor. Raise up again reaching out.
5. POSITION.—Same as above. Carry the hands from a high vertical down in front of the body to the floor, reach out on the floor as far as possible and raise up to starting position.
6. POSITION.—Same as No. 4. Alternate 4 and 5.
7. POSITION.—Front thighs against strap, hands holding bell in front of thighs. Lower hands with bell to the floor and up again.
8. POSITION.—Same as No. 7. Lower the hands to the floor as far away from the foot of the bars as possible.

NOTES.—Practice special work on this apparatus. The most direct whole waist work in the Gymnasium. Try to keep knees straight and both heels on the floor.

To make the first six exercises act strongest on the waist muscles, use 6 to 10 lbs. bells in the hands.

To make the work lighter in exercise 1, use giant pully that should be behind the chest bars.

In exercises 7, 8 and 9, use bells weighing from 10 to 30 lbs. Practice exercises 4, 5, 6 and 10, a third more times than any of the others.

Exercises 7, 8 and 9, develop small of back, glutaei, back thigh and calf muscles.

Exercises 2 and 3, act very direct on the loin and side chest muscles.

MAT WORK.—Series No. 1.

1. Run, Hop, right foot. Left foot.
2. Run, Step, right foot. Left foot.
3. Run, Leap, right foot. Left foot.
4. Run, Hop, Step, right foot. Left foot.
5. Run, Hop, Step and Leap, right foot. Left foot.
6. Three Running Hops on right foot. Left foot.
7. Three Hops right foot, start from a stand. Left foot.
8. Three long Strides from right foot. Left foot.
9. Two Run Strides, Leap, strike knees.
10. Stand Broad Distance Jump.
11. Stand two Broad Distance Jumps.
12. Stand three Broad Distance Jumps.
13. Three right side Jumps. Left side.
14. Three Back Jumps.
15. Run High Jump.
16. Run High Jump and †Scissors.
17. Run High Jump and †Heel Aerial.
18. Four Zig-Zag Jumps.
19. Three Frog Jumps.
20. Water or Distance Jumps.

†See definitions.

NOTES ON MAT WORK.—SERIES No. 1.

4. Hop on right foot, step with left.
10. Start with feet separated.
13. Jump sideways to right, keeping feet together.
18. Start from right side of mat, jump obliquely forward to left side, then obliquely to right side, etc.
19. Stand with feet together; place the hands on mat two or three feet in front of feet. Jump, separating the feet and bringing them in front of the hands. Repeat several times.
20. Separate the mats a few feet, and run and jump from one to the other. Separate them farther and jump for distance.

MAT WORK—SERIES No. 2.

1. Front Jump, land on right foot.
2. Front Jump, land on left foot.
3. Front Jump, hands strike knees.
4. Front Jump, †Heel Aerial.
5. Two Broad Distance Jumps, start feet together.
6. Jump, jump and strike knees.
7. Jump, jump and Scissors.
8. Jump, jump and "L" Scissors.
9. Jump, jump and Heel Aerial.
10. Jump, jump, hold hands side horizontal.
11. Jump, jump, hold hands front horizontal.
12. Jump, jump, hold hands vertical—palms up.
13. Jump, jump, hold hands back of head.
14. Jump, jump, hold hands behind back.
15. Jump, jump, hold hands on hips.
16. Jump, jump, hold hands folded on chest
17. Jump, jump, pull string on last jump.
18. Jump, jump, pull string one-fourth to right.
19. Jump, jump, pull string one-fourth to left.
20. Jump, jump, pull string one-half to right.
21. Jump, jump, pull string one-half to left.
22. Three hops right foot, hands back of head
23. Three hops left foot, hands back of head.
24. Front Jar Jumps, hands back of head.
25. Front Jar Toe Jumps, hands back of head.
26. Two back jumps.
27. Three back jumps.
28. Three Funny Post Jumps, knees together.

†See definitions.

NOTES ON MAT WORK.—SERIES No. 2.

In all exercises of this series, start from a stand—no run.

1. Spring from both feet, land on right.
3. Jump for height. When the hands strike knees, the whole body should be in the same position as when sitting square in a chair.
26. Make short jumps, keeping knees stiff as possible.
27. Short jumps, springing from the toes.
28. Jumping along on hands and feet, keeping knees stiff, either straight or bent.

MAT WORK—SERIES No. 3.

1. Roll-Over, feet spread, hands Yawn Stretch.
2. Roll-Over, feet spread, hands Side Horizontal.
3. Roll-Over, feet spread, hands Front Horizontal.
4. Roll-Over, feet spread, hands Vertical.
5. Roll-Over, feet spread, hands back of head.
6. Roll-Over, feet spread, hands behind back.
7. Roll-Over, feet spread, hands on hips.
8. Roll-Over, feet spread, hands folded in front.
9. Roll-Over, feet spread, arms folded before starting.
10. Roll-Over, feet together, catch knees.
11. Roll-Over, feet together, catch ankles.
12. Roll-Over, feet together, catch toes.
13. Roll-Over, feet together, Inside Arm Twist.
14. Porpoise Dive.
15. High Porpoise Dive.
16. †Frog Jump.
17. †Frog Jump, Roll-Over.
18. †Funny Post Jump.
19. †Funny Post Jump, Roll-Over.
20. Head and Hand Stand.
21. Head and Hand Stand, Roll-Over.
22. Hand Stand.
23. Hand Stand, Roll-Over.
24. Head Spring.
25. Head Spring, Roll-Over.
26. Hand Spring.
27. Hand Spring, Roll-Over.
28. Cart Wheel.
29. †Back Roll-Over to knees.
30. †Back Roll-Over to feet.

†See Definitions.

NOTES ON MAT WORK.—Series No. 3.

1. Stand with feet spread, hands at sides. Front roll-over, coming up with hands at yawn stretch.

2 to 8. Come up from the roll-over with the hands in positions named.

10. Catch knees after the roll-over to assist in raising the body.

12. Grasp the toes before starting, and hold on.

13. Start with forearms between the legs and hands on outside of ankles. Hold on.

14. Jump, raising the feet above the head and landing on the hands and roll over.

20. With hands on mat, lower the head on it, and raise the body to a vertical. Back to starting place.

21. Same as above and add roll-over.

24. Dropping on hands and head on the mat, spring over, landing on feet.

25. Same as above and add roll-over.

28. While doing this exercise the legs shonld be kept separate, the elbows straight as possible, and arms near to the ears. Falling over sideways, land on one hand, raising the body to a vertical; place the opposite hand on the mat, carrying the weight of the body on it, and complete the circle or cart wheel, by landing on the feet.

ABDOMINAL MAT.

1. Abdominal Exercise.
2. Muscular Respiratory Chest Exercise.
3. Respiratory Chest Exercise.

NOTES ON ABDOMINAL MAT.

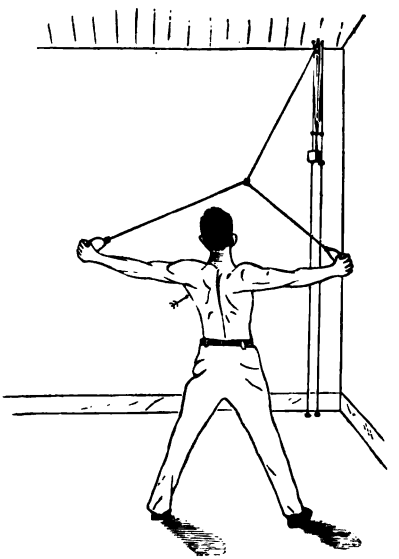
POSITION.—Lay down on mat, head next to pulley weight and toes in straps. Keep the knees straight in all exercises,

1. Hands close to the thighs and lungs two-thirds inflated. Raise up to a sitting position, bending the spine in the *lumbar region* only. Lower the body slowly back to the mat letting the head and shoulders touch the mat before the middle of the back. Empty and fill the lungs each time the body is returned to the mat.
2. Grasp the handle with both hands, knuckles turned towards the inside of forearms. With the elbows straight, raise the handle up over the head and down to the thighs, inflate the lungs full as the handle is returned to the floor. This exercise enlarges all the diameters of the chest.
3. Bending the elbows, carry the handles close over the face along the body to the thighs. Turn the knuckles down and, with the elbows straight, raise the handles high over the head and down to the starting place. Exhale as the handle is carried to the thighs, and inflate the lungs as it is returned to the floor. This excerise develops many of the respiratory muscles of the chest.

The abdominal mat is designed to *strengthen and enlarge* the most vital parts of our bodies. The abdominal parts are developed and made stronger by the abdominal exercise. The interior size of the lung room and the change in the shape of the bony frame work of the chest is affected by the scoops and arm extension exercises. While lying down blood does not have to overcome the power of gravitation, and many mucles that resist the freest inspiration are more passive than when we are standing. This fact makes this machine all the more valuable, as much better results are more quickly obtained from its use than by any other single piece of light apparatus that we have so far used in our health departments.

GIANT PULLEY.

1. The Swim, or Back Chest Work.
2. Diagonal Reach.
3. Special, or Front and Side Chest Elevator.

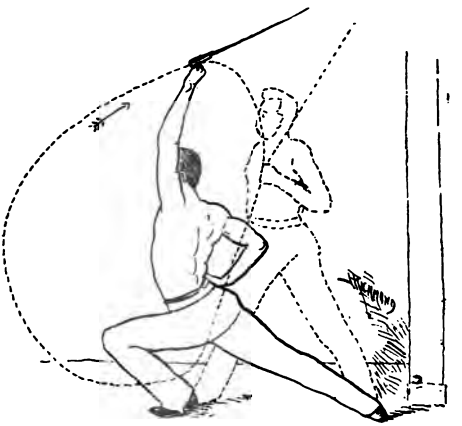


Swing Movement.

NOTES ON GIANT PULLEY.

1. POSITION.—With the handles in hands, arms extended in front of body stand far enough from pulley to raise the weight off the floor. With the elbows and knees straight, lower the hands to the floor, up again to first position; separate hands to side horizontals (see cut), and return handles again to first position.
2. Position same as No. 1. Without bending the elbows or knees carry the handles down past the right ankle, raise the handles up through a front horizontal and over the right shoul-

der. Keep the handles *close together* and *both* elbows straight. Lower the handles down through a front horizontal to the side of left ankle; and up over left shoulder.



Front and Side Chest Elevator.

3. POSITION.—(See cut.)—Hold both handles in left hand high over the head. Stand with back toward pulley and far enough away to raise the weight off the floor. Bring handles down close in front of chest to the floor, bending the left knee and reaching out over the floor as far as possible, raise the *arm* up as high as possible before raising the body, then, keeping the pectoral muscles stretched, raise the body and arm up to starting position, (see cut). Same movement with the right hand.

WAIST MACHINE.

NOTE.—KEEP ELBOWS STRAIGHT IN ALL EXERCISES.

PART I.

1. Cut to right.
2. Cut to left.
3. Alternate.
4. Reciprocate.

PART II.

1. Twist at front horizontal, R. arm up.
2. Twist at front horizontal, L. arm up.
3. Alternate.
4. Reciprocate.

PART III.

1. Twist at a vertical, R. hand forward.
2. Twist at a vertical, L. hand forward.
3. Alternate.
4. Reciprocate.

PART IV.

1. Anti-Bilious Pill, to right.
2. Anti-Bilious Pill, to left.
3. Alternate.
4. Reciprocate.

PART V.

1. Waist twist, R. hand forward.
2. Waist twist, L. hand forward.
3. Alternate.
4. Reciprocate.

PART VI.

1. Loin work, L. arm up, R. arm down.
2. Loin work, R. arm up, L. arm down.
3. Alternate.
4. Reciprocate.
5. Wrist and Forearm exercise.

NOTES ON WAIST MACHINE.

The waist machine consists of a small wooden bar 5 feet long, suspended horzontally 4 feet from the floor, between two pulley weights, held up by ropes attached to each end of bar and running over pulleys.

PART I.

1. Hands separated on the bar two feet apart, with the elbows straight, arms extended and feet stationary. Turn the body to the right, keeping the bar in front of the body. Return to position.
2. Turn the bar with the body to the left.
3. Turn the bar and body to the right and left in *one* movement.

PART II.

1. Hands separated on the bar two feet apart. Turn the bar to a perpendicular by raising the right end and lowering the left—elbows straight. Turn it back again to a horizontal.
3. (1) Turn right end up. (2) Back to the position. (3) Turn left end up. (4) Back to position.
4. (1) Turn right end up. (2) Turn left end up.

PART III.

1. Stand in between the pulley weights with the bar raised high above the head. Without twisting the body bring the right end of the bar to point to the front, and the left end to point to the rear. Return to position and practice the second exercise.

PART IV.

1. Starting position is the same as Part III. Without bending the knees or elbows lean the body to the right side, and return to an erect position.
2. Rock to the left side.

PART V.

1. Starting position is the same as Part III. Without moving the feet, bring the right end of the bar to the front, and left end to the rear by twisting the body to the left on the hips. And return.
2. Twist to the right. And return.

LEG HAMMERS.

1. Front Hammer.
2. Front Oblique Hammer.
3. No. 1, Side Hammer.
4. No. 2, Side Hammer.
5. No. 3, Side Hammer.
6. Back Oblique Hammer.
7. Back Hammer.
8. No. 1, About-face Hammer.
9. No. 2, About-face Hammer.

NOTES ON LEG HAMMERS.

1. Raise on toes and step forward about two feet, carrying the principal weight of the body on the leg that has stepped out.
2. Step out diagonally; right foot in a right-oblique line, left foot in a left-oblique line.

CROSS-OBLIQUE HAMMER.—Place the right foot out diagonally from the left of the left foot. Step the left foot out diagonally from the right foot.

3. Raise the right foot and place it about two feet from the right side of the left foot. Step the left foot out to the left side. Do not turn the body.
4. Step the right foot out about two feet to the right of the left foot, at the same time turning the body a quarter turn to the right. Turn the body to the left when stepping out with the left foot.
5. Step out to the right side with the left foot, turning the body a quarter turn to the right. Step out to the left side with the right foot.
6. Step back diagonally. Right foot in a right-oblique line, left foot in a left-oblique line.

CROSS-OBLIQUE HAMMER.—Place the right foot back diagonally from the left of the left foot, step the left foot diagonally back from the right of the right foot.

7. Step straight back, carrying the principal weight of the body on the rear leg.
8. Turn to the right on the left foot, about face, planting the right foot directly in the rear. Turn to the left planting the left foot in the rear.
9. Turn to the right on the right foot, planting the left foot in the rear. Turn to the left on the left foot, bringing the right around the left, and planting it in the rear.

IN AND OUT-DOOR BREATHING EXERCISE.

IN-DOOR BREATHING EXTENSIONS.

I. FRONT SWEEPS.

POSITION.—Hands at the sides of thighs, thumbs toward the seams of pants, back of the hands front. Keep the elbows stiff, and turn the knuckles in toward face of forearms.

FIRST COUNT.—Inflate, as you move the arms in parallel lines slowly up in front of the body to overhead, at the same time reaching for the limits of your circle, and raising the front and side walls of the chest. When you have reached a high vertical the palms should be front, elbows still stiff, and the inside of the arms pressing the ears.

SECOND COUNT.—Exhale, as the arms move slowly downward to position by side of thighs. At this point the lungs should be as empty as possible,

Repeat this movement three or four times,

II. SIDE SWEEPS.

POSITION.—Hands at sides of thighs, palms down. Keep elbows stiff, and knuckles turned toward face of forearms.

FIRST COUNT.—Inflate as you slowly raise the arms through side horizontals to overhead, reaching for the limits of your circles, and emphasizing the up stretch. At the same time, as you breathe in, raise the front and side walls of the chest. When this part of the movement is finished, the arms should be at a high vertical, the back of hands together and knuckles touching, elbows stiff, and backarms tightly pressing the ears. Exhale, as you slowly return the arms in their side sweeps to side of thighs, keeping the elbows stiff. All the air possible has been expelled when this position has been reached.

Repeat movement three or four times.

III. ALTERNATE I. AND II. SEVERAL TIMES.

FOURTH MOVEMENT.—From side of thighs raise arms in front of body, twisting the forearms to following position: Arms front horizontal, palms up, elbows stiff. Inflate, as you slowly draw arms back, so that the hands will be at the

face of the shoulders, palms up, elbows down and back, and close to side of body, raising front and side walls of chest while inflating.

When this first part of the movement is finished, the elbows should be so far back that a cane could be passed through them between upper arms and back. Exhale, as you return the hands to a front horizontal.

Repeat this movement three or four times and on the last, stop at the finish of the first part of the movement, when the lungs are inflated, etc. Now, with the hands, while maintaining the position of the elbows, slap the chest rapidly and lightly. Exhale, as you bring arms immediately down to side of thighs, without returning to position, front horizontal, arms stiff, etc.

This completes the movements. Should be practiced morning and evening, with windows open.

OUT-DOOR BREATHING EXERCISE.

Whatever will increase the breathing capacity will improve the health, and the following exercise, if done properly, in the *fresh air*, and with the clothing *loosely* worn, so as to enable you to breathe deeply, is one of the best known exercise to increase the *interior size of the lung-room:* Hold head up, shoulders back, and chest out, Inflate the lungs slowly through the nose, until they are brimful; hold until you have counted ten, without opening your lips; exhale *quickly* till your lungs are as nearly empty of the bad air as it is possible to get them. Repeat same exercise, trying to hold the lungs full while counting twenty. Try it again, and see if you can hold your breath half a minute. Finish up with three or four *deep long-drawn* inspirations. One of the best times for taking this exercise is when you are going to and from your work or studies. Hold your breath while walking ten steps; then twenty, etc. The advantage of being in the open air and sunshine is that the air is fresher than is generally found in-doors. Take this medicine *three times a day*, either before or after meals. If taken *after*, it will be found to greatly help digestion. If this exercise should make you dizzy at first, take it in smaller doses until your blood can stand the stimulation of its purifier.

The daily practice of this out-door breathing exercise has been known to increase the circumference of the chest two inches in one month.

STATIONARY RUN APPENDAGES.

1. Knees to Sternum.
2. Knees straight in front of body.
3. Knees straight behind body.
4. Arms at Side Horizontals.
5. Arms at Front Horizontals.
6. Arms at a High Vertical.
7. Fingers Interlaced back of head.
8. Arms Folded across small of back.
9. Hands on Hips.
10. Arms Folded at Front Horizontal.
11. Quarter Turn to right, and left.
12. Half Turn to right, and left.
13. Spirt!

NOTES.

These different positions and movements can be used with the stationary run in the regular dumb-bell drill.

1. Lift the legs up in front of the body with knees bent.
2. Lift the legs up in front of the body with the knees straight. Lean body well back.
3. Lean the body well forward.

GYMNASIUM MATS.

If possible, have mats enough to run four pieces of apparatus that requires them at the same time.

SIZE.

For Vaulting Bars, 5 x 16 feet. Parallel Bars, two mats on each side of bars, 3 x 9 feet. An End Mat, 3 x 5 feet.

Vaulting Horse, one mat 5 x 7 and one 3 x 5 feet. Vaulting Buck, one mat 5 x 10 and one 3 x 5 feet. A soft mat 5 x 12 feet and 6 to 8 inches thick. The best material for this mat is African moss

MATERIAL.

The best packing is Long Staple Lowell Boiler Felt, one inch thick. The best covering is No. 6 Canvas Duck, tan colored.

MAKING.

Between two layers of felt place one or two thicknesses of old bagging or canvas. Sew the edges close together. The tuftings should not be more than six inches apart. Sew with No. 6 cotton thread, eight strands waxed. The single stitches should be half an inch apart. Do not make square corners, but sew the edges together on all mats two inches thick or less. Be very careful in fastening handles on mats that they do not tear loose and ruin the mats. It would be better, if possible, to do without them.

NOTE.

These mats, that are now used in almost every important gymnasium in our country, were invented by Prof. R. J. Roberts of Utica, N. Y., in 1875.

HINTS ABOUT EXERCISE.

Inexperienced persons cannot select proper exercises for themselves any more than they can go into a drug store and put up safe prescriptions.

The first thing is to ascertain a persons' weak points, and by special exercises to equalize the physical development. The next step is to apply a wide variety of exercises, in order to develop the whole muscular system harmoniously. Muscular strength is one thing, and endurance is another. Generally only light weights are used, in order to prevent too great developement of the muscles to the expense of the nervous system.

Members after examinations, should be assigned to their special work or classes, as their needs indicate.

Members should not be compelled to go into classes, but can take private work under the director's supervision.

Every excess is evil, be it act on mind or body. He who has good health is young, whatever his age may be. Exercise makes the body a better piece of machinery to work with. Fat measures the disproportion between our diet and exercise. Repletion exhausts the stomach, while fatigue palsies its powers. Nature always goes for a long life and good health if we obey her laws. Strength of nature, in youth, passes over excesses that are owing a man till his age.

The *one-sidedness* of almost all *mechanical* acts of life causes *many* cases of spinal curvature, and to *prevent* regular, equal, and similar use of the other *arm*, *leg*, and side of the body,

The best cure for consumption is fresh air, sunshine, bathing, nutritious food, cheerful company, and wisely-directed exercises.

After 40 years of age, exercises that put great strain on the vital organs must be abandoned for more prolonged and slower work.

Developement is most active between 15 and 17 years of age, so put no great strain on the body at that age, or the foundation may be laid for ill-health in adult life.

The best medicines for nervous troubles are air, sunshine, quiet, cool bathing, and light, slow, muscular movements.

WARM WEATHER DIET.

Lean animal food, white and shell fish, green vegetables, milk, ripe fruits, cracked wheat, and hulled corn.

BONE, MUSCLE, AND NERVE MAKING FOOD.

Graham bread, oatmeal, and crushed wheat gruels, milk, eggs, baked beans, vegetables, fish, oysters, and fresh meats.

Body and mind are both gifts, and ought to be well cared for, and for the proper use of them our Maker will hold us responsible.

Exercise makes one feel like a *new man*, and gradually increases the physical powers and gives more strength to resist sickness.

Exercise increases heat and heat begets energy in the parts *used* and renders their growth more rapid.

If you want to feel like a healthy boy, you must act part of the time like one. "All work and no play will make Jack feel like a dull boy" is as true in our mature life as it was when we were boys.

Exercise will do for your body what intellectual training will do for your mind, educate and strengthen it. What is worth having, is worth working for.

Galen, the celebrated physician, declared him to be the best physician who was the best teacher of gymnastics; so exercise to prevent disease, rather than *wait* to exercise to cure disease.

Plato is said to have called one *lame*, because he exercised the mind while the body was allowed to suffer.

You must admit that a *sound* body lies at the foundation of all that goes to make life a success. Exercise will help to give it.

It will wonderfully help the young men, in connection with cool baths and a simple diet, to live chaste lives.

Varied, light, and brisk exercises, next to sleep, will rest the tired brain better than anything else.

Moderate, regular, and vigorous exercises, with some attention to sleep, diet, and bathing, will prevent the over production of fat.

Exercise is to the body what friction is to metal; the latter will rust if not used, and the body will become diseased if not exercised.

Many of the troubles that adults suffer in later life are due to impaired muscular vigor, and if gentle exercise is taken, much of this suffering will disappear.

Physical education must be taken so as to build up the weak parts first; then of the kind that will bring into play nearly all of the muscles at one time, so as to establish a regular circulation of life-giving materials to all parts of the body.

Heavy work and fancy gymnastics will generally do more harm than good. Moderate and often, of natural and beneficial exercises, should be the rule.

For business men, one hours' use of the gymnasium, with some home lessons every other day, will in three months time work them into new men.

Boys, by practice of gymnastics, rightly applied, will lay the foundation of a good form and strong constitution in adult life, by forming habits that lead them to attain a sound body for a sound mind.

As the circulation that carries strength to all parts of our frame, cannot naturally be carried on save through the medium of exercise or varied labor, we should see to it that we exercise regularly.

GENERAL ADVICE.

Begin run *slowly* and end the *same*. Breathe through the nose.

Never push up a heavier bell than you can raise with your weakest arm.

Vary your work so that all parts of the body will be used.

Take in *full*, *deep* breaths often during the time you are exercising. Do not wear tight belts.

Do not take violent exercise or icy baths, they will pave the way for heart troubles and rheumatic affections.

As long as you can study or attend to your business you can exercise.

Don't stop your regular exercise on account of a cold. Go at it until you are in a streaming sweat, then take your graded tub bath, finishing with a cool rain-shower bath of one minute's duration. Rub dry. Keep warm, and on a low diet for a day or two.

The most beneficial exercises can be done nearly right at the first trial, thus showing that the gymnasium is for the multitude.

Don't work hard just before eating, as it will exhaust energy that is needed for the digestion of the coming meal.

Young members should avoid heavy work, as it will retard the future full growth of their bodies.

Extension movements should finish up the work for the day. Full stretch exercises on the roving rings, high bars, etc.

Any exercise that will act strongly on the middle third of the body will greatly help in curing stomach and liver troubles.

HINTS ON BATHING.

Don't bathe when you feel *very* tired, or just before or after a full meal, or where a draught of air can blow on you.

Bathe with *sponge* bath AFTER *exercise*, for exercise increases circulation, and circulation, while it feeds the body with *new* atoms, at the *same time drives* the *impurities* to the *skin*, that *tepid* water removes; after a few minutes' sponging with the warm water, quickly wash with cooler water, then *dry* the body with a *soft*, absorbent towel, and polish off with one a little coarser. Such a bath will not take over *ten* minutes. Use the tub when you take your weekly bath.

The best evidence that your exercise and bath has done you good is the pleasureable sensation of warmth and a general *elevation* of spirits, thus proving that the combination of *exercise* and *bathing* is a *natural* tonic and stimulant.

Bathing will increase the *activity* of the pores of the skin so that they will act as self-regulating radiators against heat or cold.

The Greeks thought that exercise and bathing were inseparable.

When lungs are weak, keep up a vigorous circulation to the skin. Cool, daily bathing, with vigorous rubbings, is the proper thing.

Use the hand-shower douche and salt-water bathing for varicose veins, old sprains and *weak* parts of the body.

Do not leave the Gymnasium with coat and mouth wide open—you may catch cold.

In going from a warmer into a colder atmosphere always breathe through the nose, keeping the mouth closed

SHOWER BATHS.

Never let the shower strike you full on the head. A warm shower followed by a cool sprinkling, is preferable to a cold bath after exercise. A shower bath extracts less heat from the body and is more stimulating than a tub.

SWIMMING BATHS.

Wet your head thoroughly upon entering the water to prevent rush of blood to brain. The best effect can be obtained by not remaining in the bath more than ten minutes.

COLD BATHS.

It does you good if it sends a warm glow all over the body, and you feel like jumping to your work. It does you harm when there is a poor reaction after the bath, which is shown by a cold skin and depressed feeling.

WEEKLY TUB BATHS.

When you take your weekly tub bath, use only the best white castile soap. Don't soak in the warm water over five minutes. After you get through the warm wash, try your back of neck exercise. To prevent catching cold, quickly wash off in cool water, and wipe dry.

OUT-DOOR BATHING.

If you are sweating there is no need to wait to cool off, but plunge in at once. Come out before you become chilly, the fingers cold and white, and the lips purple. If after this care the swimming bath fails to agree with you, stick to the in-door graded sponge bath.

WARM BATHS.

Is the best bath for cleanliness when accompanied by a liberal use of castile soap. Too frequent use debilitates the system. This bath promotes perspiration, and removes soreness, soothes, and will make one sleepy, so a good time to take it is just at bed-time. If taken at any other time, to prevent catching a cold, rinse off with cool water and rub dry.

THE GRADED SPONGE BATH.

When through exercising do not stand around until you cool off, but go immediately and take your bath. After a few minute's sponging all over with warm water, let the cold water run into the basin, or tub, with the warm water. Quickly sponge off with this cooling water until your system cries enough; then dry the body with a soft, absorbent towel, and polish off with one a little coarser. Such a bath will not take over ten minutes of your time. It should be taken in a warm place, and where no draught of air will blow on you.

Put up placard on hints on bathing in bath-rooms. Have them printed in large type so that they can be easily read.

PRESCRIPTIONS.

FOR THE DEVELOPMENT OF DIFFERENT PARTS OF THE BODY.

(See Blakie's "How to get Strong.")

HEAD BACK AND CHIN IN.—Back-of-neck work in first division of dumb-bell drill. Special work on neck machine.

*MIDDLE TRAPEZIUS.—(Shoulder blades.)—Third ending of 1st series on pulley weights, not letting the arms go below or above a horizontal.

*LOWER TRAPEZIUS.—(Just below shoulder blades.)—Swim movement on giant pulley; third ending of 1st series on pulley weights, allowing the arms to go above side horizontals when separating them; also, roll the shoulders back and down, as in 2d division of B. D.

RAISE THE SHOULDERS.—Shoulder raiser 3d division of B. D.; or raising heavy weights from top of shoulder to high vertical; also, Indian club exercise.

FRONT CHEST, EXPANDING FROM THE INSIDE.—Breathing exercise 1st division of B. D., or sternum elevator 3d division of B.D.; also, respiratory chest exercise on abdominal mat; intercostal machine.

FRONT CHEST, DEVELOPMENT OF OUTSIDE.—Second series of pulley weights, exercise 4, part 6. Be careful of too much of this exercise, for the development of these muscles tends to pull the shoulders forward. Most people need two-thirds more posterior work than anterior.

*† CLAVICULAR SECTION.—Clavicular exercise, 5th division of B. D.; fifth exercise in Lay Down B. D.

*† SIDE WALLS OF CHEST.—"A Walls," 3d division B. D.; or intercostal machines; also, hang on high bars, hands close together.

*† STERNUM.—Sternum expression in 1st division of B. D., or sternum elevator in third division of B. D.; also, special on abdominal mat (bent arms past face).

*† ABDOMEN.—Use abdominal mat, or sit on a low stool with feet fastened to the floor, and work the body backward and forward, first inflating the lungs; don't lean back too far. This acts directly on the abdominal muscles, and generally a good cure for all stomach troubles. The action of standing on the feet and bending forward, trying to touch the

* See definitions.

† See Y. M. C. A. Watchman, Nov. 1, 1883.

hands to the floor, and up again, effects a massage action on the abdominal muscles.

*TRICEPS.—(Upper back arms.)—Holding the body with the hands on the parallel bars, lower the body between them and raise up again; repeat a number of times; first part of the 2d series on pulley weights.

*BICEPS.—(Upper front arms.)—First exercise of 4th division of B. D., using six to ten pound weights; first ending of 1st series on pulley weights.

FOREARMS.—Wrist shakes, wrist extension, and wrist twists of B. D.; Indian clubs on movements below the waist; "table movement."

FRONT THIGH.—Hang by a high bar and raising legs to a front horizontal with knees stiff; jumping and fast walking; stand with back to leg pulley weight, and with the foot in the strap raise it up a number of times; lay down bell drill, first exercise; also, squat, as in the sixth and seventh exercises of 2d division of B. D.

BACK THIGH.—Stationary run; or keep the knees stiff in all exercises where the body is bent forward toward the floor.

INSIDE THIGHS.—Jump, feet apart, and slide them together on the floor; stand with right side of body next to leg pulley weight, put the right foot in strap and pull it past the left leg, knee stiff; opposite side for the left leg; also, horse-back riding.

BACK LOWER LEG (CALF).—Walk on toes; wear low-heeled shoes.

FRONT LOWER LEG (SHIN).—Walk on heels; sitting on a chair, with heels on the floor, raise the toes up sharply toward the knees.

ANKLES.—Raise on toes, on heels, and spread eagle as in 2d division of B. D.

LOINS.—Loin work on Whole-waist developer; Cut and Liver Squeezer, in 3d division of B. D.; or sides and loins pulley weight.

SMALL OF BACK.—Whole-waist developer; the first extension exercise of the 5th division of B. D., with a six to ten-pound bell in the hand, slowly and knees stiff; swing heavy bells between legs and up over head.

*GLUTEI.—Keep the knees stiff in all exercises where the body is bent forward toward the floor (pulley weight, wand and dumb-bell drills). Spread eagle in 2d division of B. D.

*See definitions.

DEFINITIONS.

CUTTING OFF A HAND, is carrying the legs between the shoulder and the part of any apparatus that is held by the hands, letting go of the apparatus with the hand named, and catching it again with the same or other hand. Cut off one hand with both legs, one hand with one leg, or both hands with both legs.

HEEL AERIAL.—Jump from the floor, or any low apparatus, lifting the heels up against the back of the thighs and strike them with the hands before landing—striking the heels while in the air.

JUMP.—Spring from both feet (see leap), landing on one or both feet.

In preparing to make a jump or vault, do not bend the knees in front of the body, but *separate* them raising the heels from the floor.

Frog Jump.—With the feet together, lean forward with the hands on the floor, thumbs touching. Now lift the feet up, separating them as far as possible, and bring them in front of the hands.

Funny Post Jump.—With the knees straight and hands on the floor, jump alternately with the hands and feet, keeping the knees stiff.

LEAP.—Spring from one foot, landing on both.

LOCK.—Bending the fore-arm to a lock is bringing it and the arm as close together as possible. Straightening the fore-arm to a lock is extending it as far as possible upon the arm.

MUSCLES AND BONES THAT WILL BE USED IN THIS WORK, WITH THEIR TECHNICAL NAMES.—Abdominal Muscles.—Cover the front of the trunk from the lower ribs to the groin.

Arms.—That part of the upper limbs between the shoulders and elbows.

Biceps Muscles.—Front of arms between shoulders and elbows.

Chest.—That part of the body enclosed by the sternum, ribs and spinal column.

Clavicle (Collar-bone).—Lies between the top part of shoulders and top of sternum.

Forearm.—That part of the arm between the elbow and wrist.

Glutei Muscles.—The large muscles reaching from the back and top of sacrum down to back upper thigh.

Sternum.—The bone of the middle front chest reaching from the collar-bone to lower part of the chest. Both ends can be felt quite easily.

Thigh.—That part of the lower limbs reaching from hips to knees.

Trapezius Muscles.—A superficial muscle covering the upper and middle back chest. Its attachments are on the base of the skull; the lateral, on the shoulder blades; and the middle along the dorsal verterbræ. The development of these muscles will keep the head and shoulders back.

Triceps Muscles.—Back of arms, opposite to biceps.

PULL THE STRING.—Standing with feet together, jump, separating them, and landing with the legs separated. Jump back to position.

ROLL-OVERS ON MAT.—Front Roll-Over.—Separate the legs a little, let the body fall forward, the hands striking the mat first, then, the back of shoulders and along the back, and last, the feet. Bow the back well and drop the head forward when the body strikes the mat. This exercise should be done quickly and with momentum enough to throw the body forward when the roll is made, so as not to take a step back. Raise up on the feet with the arms held at a front horizontal.

Rack Roll-Over.—Separate the legs a little, hands on top of shoulders, palms up. Bend the knees and fall back, letting the hips strike the mat first, then along the back, and last the shoulders and head. As the shoulders and hands strike the mat, push up hard, so as to land back on the feet.

SCISSORS —(See cut.)—Jump from the floor or any low apparatus, spreading the legs and bringing them up to a horizontal, and strike the toes with the hands before landing. The principal action is on the abdominal and thigh muscles.

"L" Scissors.—Same as above, except the legs should be together when at horizontal, the body and legs forming an L.

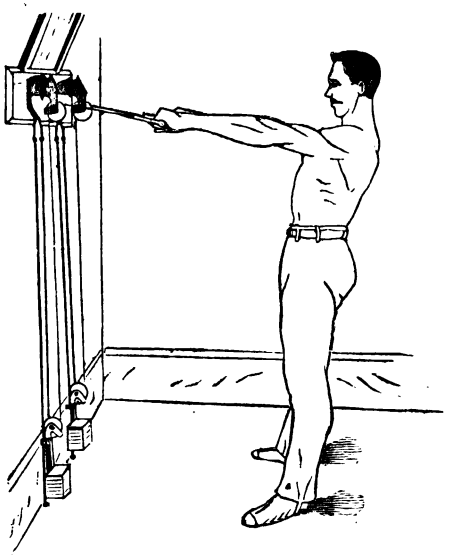
STERNUM ELEVATOR..—Elevating the sternum.

Sternum Expression.—Lift the diaphragm and expand the front chest. The action will enlarge the capacity of the chest.

VAULT.—Jump over the bar (or bars) with the assistance of the hands, in one continuous movement; no other part of the body touching the bar, or going below it. When preparing

to vault do not bring the knees together in front of the body, but separate them, bearing the weight of the body on the toes.

YAWN STRETCH.—With the hands at a high vertical, reach up as high as possible, thereby stretching the whole body. In this way contract and elongate the muscles several times. This exercise adds elasticity to the muscles.



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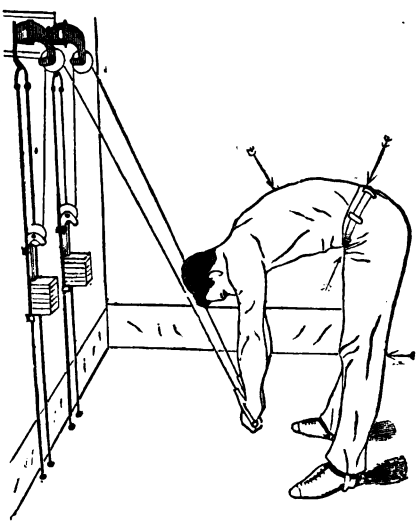

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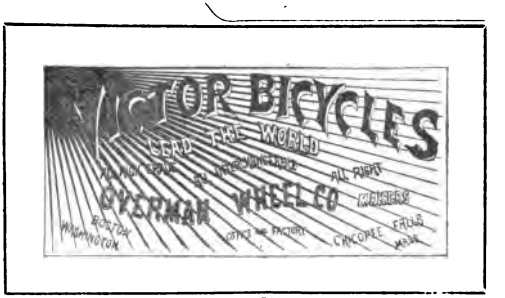
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